## NOTE I.

ACROSS SOUTH AMERICA TO TIERRA DEL FUEGO AND BACK THROUGH THE SMITH-CHANNEL.

BY

## F. E. BLAAUW.

On the first of Febr. 1911 I left Amsterdam on the new steamer "Zeelandia" of the "Hollandsche Lloyd".

The weather was cold and foggy and hoar-frost was everywhere.

After having touched at Dover, Boulogne-sur-Mer, Vigo and La Corunna, we arrived at Lisbon where the beautiful clear weather was quite a relief after the darkness of the northern skies.

We went on land and visited some fine buildings in the town and saw workmen busy repairing the holes that had been made in the roof and front of the Royal Palace which had been shelled from a man-of-war lying in the port by the insurgent republicans.

Towards evening we left the beautiful port under a glorious setting sun and now started to cross the Atlantic to Rio de Janeiro.

The whole crossing was very uneventful. We passed Madeira, the Canary islands, and the Peak of Teneriffe clad in snow showed us all the glories of a setting sun on its white surface.

At about the 20° northern latitude we passed a zone where a kind of *Physalia* was very abundant and on the not very quiet sea the beautiful iridescent floats looking

like so many toys made of Venetian glass were seen all day long, not to be seen again during the whole voyage.

On this same day I saw the first flying fishes. They were of large size, at least twice as large as a herring apparently, with fine clear blue "wings" and long tails.

They were not numerous and were seen in twos or threes together as they jumped out of the water sidewards in front of the vessel where the ship cleft the water.

As we were nearing the equator another kind of flying fish appeared.

They were quite small things which seemed to live in flights of from 10—20 or more individuals. They looked very much like flights of swallows skimming over the water.

The majority had silvery white wings whilst a good many had pale blue wings and only a very few had them brick red (these were a little larger).

As the fishes never left the water exactly where one expected them to come, it was not so very easy to follow the flight of some one fish from the beginning till the end, but I am of opinion that the fish makes a flapping motion with its wings the moment it leaves the water, to keep them extended during the whole of its aerial course only moving them slightly for balance.

They seem to have the power, when about to go to the water again, to continue their flight for another period if something comes which makes them think this desirable.

In this same way they are able to rise in the air if a high wave comes unexpectedly in their way so as to fly over it.

Under all circumstances when the flight has come to an end they drop into the water like a stone getting under at once, and not at first settling on the surface.

This always came as a sort of a surprise as one would — the fishes looking so much like birds — expect them to fall on the water first, before disappearing under it; but they never did so, nor probably could.

South of the equator the fishes were not nearly so numerous as north of it in the same latitude.

One day an enormous Sea Turtle was seen leisurely swimming on the surface of the sea near the vessel.

Of birds there were none or nearly so.

When crossing the line I saw some pairs of little sooty black Petrels with white rumps, and a day earlier I saw a bird which looked very much like a rufous coloured kite, but probably was some kind of Skua. It did not come near.

In due time we reached the Brazilian coast and one morning at 3 o'clock (the 22<sup>d</sup> day after having left Amsterdam) the entrance of Rio de Janeiro harbour.

The captain had kindly promised to wait with entering the harbour untill it was daylight and so at about 5 we enjoyed from the highest accessible part of the vessel the magnificent sight of the entering into the most beautiful port of the world.

After having passed between the most fantastically shaped stony mountains and rocks partly bare and partly overgrown with palmtrees the town itself came into view stretched along the sea with the mountains behind it.

The first birds I saw there were a lot of *Black Vultures* which came flying from the mountains of Petropolis, where they had probably spent the night, to their dayquarters in and around the town.

As the morning advanced a most weirdlooking bird all wings, points and angles, like a floating rag, appeared above the bay and began to fly restlessly backwards and forwards.

This was my first acquaintance with the Frigate Bird, and a most extraordinary sight it truly is!

Some Gulls were also appearing and some Dolphins were playing among the ships.

At last after all the formalities with the Brazilian officials had been completed and we were allowed to land we took a boat and soon afterwards landed in the Brazilian capital, where we were met by a lot of dusky looking people that offered us their services.

After having taken a walk through the principal streets we had some lunch and after that hired an auto that was to show us the more interesting parts of the town

and the harbour and to take us over the more accessible mountains around it including the Tujuca.

In the outskirts of the town I saw a good many Black Vultures, probably my friends of the early morning, and on the roads of the parks I saw a number of the diminutive Passerine Doves walking daintily in search of food. Also Sulphury Tyrants were repeatedly seen in those parts.

During our drive over the forestelad mountains I saw very few birds and can only remember a pair of little Grey Pipit-looking birds that disappeared in the underwood. — The beautiful large blue and purple Morpho-Butterfly was occasionally seen by me between the trees of the mountainside on which purple blossoms were abundant and an equally large pale yellow one was also seen occasionally.

On the whole tour I saw remarquably few birds or insects, but perhaps the Season was to blame for that.

Towards the end of the afternoon we also visited the magnificent *Botanical Garden* and here the birds were more numerous.

New to me were a few Black Drongo's, two or three kinds of Thickbilled Finches and some Blue Sugar Birds.

The little Finches were bathing in a diminutive stream that crossed the grounds and were quite tame.

After a general survey of the Botanical Garden with its magnificent bamboos, palmtrees etc. etc., we had to hurry back to the port in order to get a boat that would take us back to the ship.

On the water we got a tremendous rainstorm, however reached the "Zeelandia" without mishap.

Next morning found us at the entrance of the port of Santos, and as we slowly proceeded on our way between old portugese fortifications and small villages surrounded by palmtrees the town of Santos itself came into view.

As the ship had to take in some cargo there, we went on shore and ascended a hill behind the town on the top of which was a small chapel.

On the way, flying between the flowers of some way-Notes from the Leyden Museum, Vol. XXXV. side cottagegarden I saw repeatedly Blue Sugar Birds that however did not come very near.

Coming back I happened to pass the Mercado Central, where some small birds were sold along with vegetables and every other concievable thing.

Amongst those birds I noticed two beautiful males Turdus flavipes, two or three kinds of Tanagers and some lovely blackheaded or better blackcrowned little Thickbilled Finches, Spermophila pileata Scl., diminutive Finch edition of our Blackheaded Tit!

Having regained our ship we proceeded on our way to Monte Video where we only stopped a couple of hours and did not land, and in due time the next morning or better afternoon got to Buenos Ayres.

As is usual in S. America officials take a long time about their business and it was getting dark before they were ready.

Now came a surprise. We had expected either to land with our luggage or to remain on board till next morning.

We were however counting without the complications of S. Am. officialism!

They expected us to land *without* our luggage which was to be kept by them in pound till next morning when we would have to get back to have it opened etc.

After some concessions on both sides the thing was settled and next day at twelve we were in our hotel including our luggage.

Buenos Ayres is a fine town and the villa quarters and park are truly wonderful.

During the afternoon I took a carriage to have a general survey of the place and I was greeted by the welcome sight of a pair of *Guira Cuckoo's* that were flying after each other in a villa garden. On the walks in the parks *Columbula picui* was very abundant, but the most conspicuous bird of all was *Furnarius rufus* that every where in parks and gardens was striding busily along the walks.

If disturbed he would fly away protesting angrily with loud calls.

This bird has evidently taken kindly to civilization as it is literally to be seen in every park or garden.

Also very conspicuous by their colouration and loud screams are the *Sulphury Tyrants* which are continually fighting with the Red Ovenbirds.

The Red Ovenbird is often seen caged in the bird shops but the poor things generally look very miserable and they have the reputation that they won't live in confinement and are very delicate.

On the race course with its by the bye truly magnificent buildings, were large flocks of *Frigilus fruticeti* running on the ground.

Buenos Ayres has a very fine Zoological Garden full of interesting shrubs and trees which aided by the good climate thrive extremely well.

At the time of my visit my sight was gladdened by the presence of a flock of 6 beautiful *Emperor Pinguins*, but on the whole I was rather disappointed by the absence of anything resembling an argentine collection.

Mr. Onelli, the director, who kindly took me round the Garden said that it was extremely difficult to get argentine beasts and birds and that it was much easier to get other things.

On the wellkept lawns I noticed two beautiful *Blackwinged* or *Andean Geese*. Mr. Onelli promised to get me a dozen; but he afterwards told me, that he could not get one! South America helas is full of promises which are never kept!

I had a good look round the Garden where a few White Herons with full flight were often seen flying from one piece of water to the other, the remains of a large number that had been put out several years ago but had mostly strayed away; and after having taken leave of my kind guide I drove back to the town through avenues planted with the graceful Casuarina stricta bordered by woods of Eucalyptus-trees.

I only spent a couple of days in Buenos Ayres and took a ticket on the trans-andean-railway to *Mendoza* at the foot of the Andes.

From Buenos Ayres to Mendoza the country is perfectly flat, and the whole journey took about 24 hours.

The summer had been very dry so that the general aspect of the country was very barren and meagre and dead cattle were a usual sight.

As soon as we left the town the *Chimangos* became apparent and were my nearly constant travelling companions ever after.

The railway usually led along the old carriage or waggon track and as I afterwards found out, the *Chimango* is the *bird of the road* living on any refuse that he may get there.

Past Mercedes station we passed a large Ostrich farm of American Rheas and in the fields several Vanellus cayennensis were very busy and very noisy.

The Burrowing Owl, Spectyto cunicularia, was also seen everywhere generally in pairs perched on the poles that carried the wires between the fields or along the railroad.

In a pool at some distance, we passed a great flock of White Herons which completely filled the shallow water.

On a wire fencing the railroad was a beautiful *Milvulus* tyrannus with its long tail and beautiful white and black plumage.

In the afternoon the train passed through an enormous shallow pool in which had assembled thousands of the S. Amer. Flamingo, Phoenicopterus ignipalliatus.

Amongst them, close near the railway, were half a dozen Coscoroba Swans.

It was a wonderful sight and great luck that I could enjoy it, because two months later when I returned by the same road the pool was almost dry and nearly all the birds had gone.

In some parts the pampasgras, Gynerium argenteum, was in full bloom and the beautiful plumes shaded from silvery white into wine colour.

On one occasion as the train stopped to repair some damage I got out and found the whole road overgrown with *Portulacea*.

The Caracara, Polyborus brasiliensis, was occasionally seen but was never numerous, whilst the Chimangos were nearly always there.

Next morning we arrived at *Mendoza* at the bottom of the Andes, not more than four hours late upon the time we ought to be there, which I was told was a great accomplishment of the railway drivers.

In fact only one engine hat broken down on the way and had to be left behind, but the second one drew us all right. Mendoza looked a very dusty place with large vine plantations, and most or perhaps all the houses and walls were made of dry mud.

We left the train with our luggage and proceeded to the Hôtel which looked rather comfortable outside but had only one huge room to give accommodation to the three of us.

In the afternoon we made a walk along the mountain side which was completely overgrown with *Cactus-bushes*, some of them carrying beautiful white flowers, besides other bushes and plants every one of them thorny to the extreme.

In open spaces I saw some *Picui Doves* looking for seeds and on one or two occasions a diminutive *little* Kestrel hovered over head.

There is a *Public Garden* in Mendoza in which there is a small collection of S. Am. animals and birds.

So f. i. there were some splendid *Puma's*, several *Vicun-*na's, a number of *Condors*, *Caracaras* and other small birds of prey and several nice *Coscoroba Swans*.

A splendid specimen of *Erythrina crista galli* as large as an apple-tree was flowering profusely near a piece of ornamental water.

The rocky slopes of the Andes are said to be the home of the curious mole-like Armadillo, Chlamyphorus truncatus.

Next morning we took the train again, which was to take us farther west into the Cordilleras to Puente del Inca.

We now came right into the mountains ascending continually.

The country was stony and prickly to the extreme.

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Conspicuous were a number of Swallows along the riverbed of the Mendoza.

In a mountain stream between San Ignatio and Dotrerillos I saw 6 specimens of the beautiful *Anas specularis* which I had never seen alive before.

In the same neighbourhood were some Cayenne Lapuings conspicuous as usual by the white in their wings when they alighted in their peculiar way with wings high up in the air.

A large Blackbird, Merula fuscata, was occasionally seen in the bushes and as we halted near a small station in the Uspallata-pass I saw two young Blackbirds of this same species in a cage — in colour like our own young Blackbirds.

As we went on and got higher into the mountains the Cacti gradually disappeared and Yellowish green leefless bushes now took their place.

I did not see many birds now and the little *Red Kestrels* were the most conspicuous ones.

Near Caleton I saw a beautiful male Merganetta andina flying over the Mendoza-river and as we neared Puente del Inca I saw two or three times a small beautiful blue grey bird of prey probably Elanus leucurus, with white tail.

In Puente del Inca we left the train and found there a very comfortable hôtel.

The only drawback was the high altitude which did not very well agree with me.

The landscape was grand and wild beyond description, enormous masses of perfectly barren mountains all around. These mountains showed the most extraordinary colours, purple, green, blue, pink, yellow; it was like a moon landscape, at least I have a feeling that it must be somewhat like it.

Here and there were snowclad mountains, and a few hours before reaching our station we had had a good view of the enormous masses of the *Aconcagua*.

Puente del Inca has its name from the fact that a Notes from the Leyden Museum, Vol XXXV.

mountain-stream runs under the highroad to Chili forming a natural bridge.

Our object for alighting at Puente del Inca was that we wished to pass the *Cumbre* on muleback instead of going through the tunnel.

Next morning at 8<sup>1</sup>/<sub>4</sub> we bestrode our mules with the intention of riding over the pass to Caracoles on the Chilian side where we were to take the train to Santiago.

Our road, the old high-road or mule-road from the Argentine Republic to Chili led us along the most beautiful wild mountain scenery.

On the way I passed some Zenaida auriculatu which were looking for food amongst the stones, one Phrygilus aldunatii and some other Phrygili (grey, redbrown neck and yellow throat). On the rocks were very conspicuous, as they came quite near, some birds like magnified Nightingales almost as large as small Thrushes.

Before ascending the steep slope which was to lead us to the top of the pass we halted at *Las Cueras*, which is the spot were the train enters the tunnel, to get some lunch and let the mules have a rest.

After this we got on again and ascended the pass along a zigzag road getting beautiful points of view as we got higher and higher and enjoying again a splendid view of the snow-clad masses of the Aconcagua.

During the ascent I passed numerous small flocks of the yellow and black Siskin (*Chrys. atrata*) which looked strangely out of place in this perfectly barren region. They perched on the rocks as there were no shrubs nor any vegetation and probably looked for seeds on the ground.

We got to the pass in due time where the two governments of Argentinia and Chili have erected a bronze statue of the Christ on the frontier-line between the two countries.

I am told that they could not agree towards which country the Christ would look and so they made the statue look sideways along the frontier line and this rather spoils the effect.

Besides the statue there is a stone-hut in which travellers could find some shelter.

Although it was only the beginning of autumn and no snow on the pass, which is 3900 Meters high, the wind was bitterly cold and this cold and the rarified air made me think a long stay in this place undesirable.

So I turned my back to the Argentine Republic and before me laid the wild glories of the *Chilian Cordilleras* in all the colours of the rainbow.

As I descended I came along several carcasses of *dead* mules and horses that had died on the way and got mummified in the dry pure atmosphere.

A little lower down a hut was inhabited and in front of it stood erected one of these horse mummies upsaddled and bridled.

This was the equivalent of a painted sign in old Europe and meant that travellers could feed their bridle-horses there.

Not very far from the top of the pass on a flattish sandy bit amongst the stones I flushed three Seedsnipes, *Thinicorus rumicivorus* Erckh., and on the very top I saw a small Bird of Prey which I could not identify.

I also came across a pair of small brown Birds with black and rufus stripes on the wings, which were resting on some stones.

After a steep descend we reached Caracoles at about 2 o'clock in the afternoon, being the little station where the train left the tunnel on the Chilian side.

In due time the train arrived carrying our luggage, to our great satisfaction.

The Chilian slope of the Andes is much steeper than the Argentine side and in zigzag lines we slowly wound our way downwards amongst the wild splendor of the mountains. We passed the *Laguna del Portillo*, the *Laguna del Incas*, cristal lakes in purple green or blue surroundings, all without in this season a semblance of vegetation apparently, and proceeding on our way we gradually came into a zone were things began to grow and the *prickly things* were again with us.

At first small and stunted the Cacti became more and Notes from the Leyden Museum, Vol. XXXV.

more numerous and soon the valleys and whole mountain sides were overgrown with the big candelabre Cacti which were full of bright small scarlet flowers which covered some of the stems entirely.

Along the mountain-streams the vegetation looked almost luxuriant and as we at last came into a civilized zone the *Lombardy Poplar* was a feature of the landscape.

Late in the evening in total darkness we arrived in Santiago and found lodgings in the Hôtel Oddo, which is kept by a Frenchman and ... by rats! —

The situation of Santiago is one of the finest in the world. It lies in a plain between the *Corditleras* and the *Maritime Andes* so that it is surrounded by the most beautiful Alpine panorama one can imagine.

In the midst of the town at one end of the wide boulevard or "avenida" which transverses it, is a large rock or small stony mountain which has been planted as a public park — the Santa Lucia.

Facing the "avenida" gorgeous stairways of cut stone lead up to it, but in other places little winding stairs cut in the rock and overhung by the luxuriant vegetation give a more private access to its heights.

One morning during my stay at Santiago I took one of these little roads and at about half way following a stone ballustrade the stairs formed an angle and into that angle a thin stream of water spluttered into a shallow stone-basin, whilst Eucalypti and Cypres-trees were growing near.

The stone ballustrade was overgrown with searlet Geraniums and some Fuchsias formed the underwood.

As I was leaning over the balustrade looking at the flowers I suddenly heard a shrill scream and behold in front of me stood in mid air not three feet away from me an Oldgold-capped Green Humming-bird.

It stood in the air for a while then suddenly dropped into the shallow water of the basin and began to splash to its hearts content all the time playing with the gorgeous oldgold coloured feathers of its head.

And as it was washing I heard another scream and a Notes from the Leyden Museum, Vol. XXXV.

second Humming-bird stood in the air over the basin. And as the first one saw this it stopped washing, it sprang up into the air and attacked furiously the intruder. And as they were fighting the golden headfeathers were in constant play, whilst yellowish spots near the eye seemed to sparkle for excess of colour.

And whilst they were fighting another Colibri of the same kind appeared and began to splash in the basin and from all sides they were coming, and there was great warfare and a great washing and sometimes as many as seven were all washing whilst above the basin the little warriors fought their battle to interrupt it by suddenly dropping into the water.

It was all not three feet from my face and it was a sight never to be forgotten and I thought that if I should see nothing else that might interest me in Chili this sight would have been worth coming over land and sea all those weary miles!

And after they had all washed at their hearts content they one by one sprang into the air and disappeared.

But they were not far away yet, but sat in the Eucalypti and the Cypres-trees and dried their feathers, so that all their beauty that had left them, came back to them.

And after this they one by one uttered a sharp shriek and were gone.

I continued my way to the top of the Santa Lucia and admired the view, but not all the glories of the snowclad Andes could efface the delightful sight of the homelife of the Goldencrowned Humming-bird (Eustephanus galeritus Mol.).

One day after having gone over the Mercado Central to look for birds I was rather disappointed as I saw only a few Zonotrichia pileata, some Phrygilus aldunatii, which is supposed to be larger than the more southern form, Phr. gayi, and certainly is lighter in colour, also some Turdus magellanicus and some Bolb. monachus. I then went on to see what birds were in the nearly dry riverbed which is close by.

I here saw a good number of *Diuca Sparrous* which belong to a much *larger* form than those found in the Argentine Republic.

The *Diuca* takes in Chili the place of our House Sparrow. Whenever during my travels through that country I saw Diucas I was sure to find some settlement or other.

They go about in troops and are quite tame. Amongst them one generally sees a pair or two of Zonotrichia pilcata. These birds although often going with the Diucas keep to themselves. They are rather retiring of disposition and are long gone away before the Diucas think of ever moving.

They are dainty little birds to look at, and seem to be ashamed of going about in such vulgar company as the Diucas are. The crown-feathers are exectable and give them a very pretty look.

There is a pretty park or garden in the outskirts of Santiago called the *Quinta Normal*. Besides containing other buildings it boasts of the Natural History Museum. I went over it under the kind guidance of the Curator Señor Quyada.

I am sorry that I can say nothing good about the way this museum is kept as a more neglected lot seldom came to my view!

This is a great pity as there is a very good collection of Chilian birds.

I noted two fine specimens of Fulica gigantea of the laguna Huachiri (1870), some specimens of the curious Hylactes megapodius Kittl., of Pteroptochus albicollis Kittl., etc. etc. The Director Dr. Moore (a Chilian with an English name) told me that they were going to improve things in the Quinta Normal. They had just completed to build him a new house! Let us hope that the museum will have a turn next!

In the same garden there is a small zoological collection mostly consisting of tame poultry, I am sorry to say. The trees in the Quinta are very fine.

From Santiago I took the train south to Valdivia.

Chili is a long plain bordered to the east by the Cordilleras and to the West by the Maritime Andes.

The train runs along this plain having only an occasional embranchment to the east or west.

The train started in the evening so that I did that time not see much of the country before next morning.

At about  $7^{1}/_{2}$  next day I passed a small lake in which some beautiful White Egrets were very ornamental. Near the railwaystations Diucas were abundant and some Zonotrichia pileata were also occasionnally seen. In the fields Mimus theuco, with their white eyebrow-streak and white marked tails, were casually seen in small families.

After the train had branched off at *Renaico* we went along the river for some time and here I had the good luck to see a *Coppu-Rat* swimming across.

Valdiria has a beautiful situation on the river but the town itself is the most miserable thing one can imagine.

To begin with, a great part of it toward the river was burnt down three years ago and very little had been done yet to rebuild. In fact I understood that the course of the streets that certainly wanted alterations had not been fixed upon yet.

There is no plaster of any kind in most of the streets and in winter in the rainy season the streets get so full of holes and muddy that the oxen actually get drowned there.

The way which leads from the railway-station to the town is made hard in some way by putting wooden logs one against the other and as they get rotten and full of holes this is not a very great improvement.

From Valdivia I took a boat to Corral and from this boat I saw several *Turkey Vultures*, *Cathartes aura*, hovering overhead.

The mountains bordering the Valdivia-river are all overgrown with forests which unfortunately are destroyed by indiscriminate burning in a most disgraceful way.

Near Corral I saw several Black Cormorans, Phal. brasiliensis, some Terns and a Dipper.

I did not spend many days at Valdivia but having heard that Auracaria-woods, which I wanted to visit, were to be found near a place called Purén more to the north, we decided to take train again to a place called Los Sauces on the railway.

From the train driving from Valdivia to Renaico I saw a Pigmy Outl, Glaucidium nanum sitting on the telegraph wire, little troops of Black Molothrus, some Zenaïda Doves and, flying over the tops of the trees, large Winecoloured Pigeons.

Near Metrenco I saw for the first time a flock of Military Starlings whose brillant scarlet breasts made quite a glow of colours in the landscape. I also noticed a male of Peristera cinerea, a Caracara and lots of Chimangos along the roads as usual. A Cathartes aura was also seen.

At Los Sauces we left the train with the intention to spend the night there, but no lodgings being obtainable we decided to hire horses and go on to Purén at once where a hostelry was said to exist.

This arranged and the horses being there after  $1^{1}/_{2}$  hour, we rode on into the open country following a wide waggontrack amidst enclosed fields.

On the road the *Chimangos* were as numerous as ever and it was quite remarkable to see how tame they were. They might have been the pigeons around St. Pauls Cathedral in London.

They differed in size in a most striking way. Some were as *large* as a Black Crow whilst other would not exceed a *small* Tame Pigeon in size. One or two *Caracaras* were also seen but these, being often persecuted, were much wilder.

The country around was very barren. On some or most of the fields the crops had been gathered, other tracts of country were supposed to be pastures but were mostly dried out beyond recognition.

Only occasionally in a damp hollow was some green pasture. Our way led us slowly uphill and we crossed some streams.

Near one of them I saw a largish black Waterrail (Rallus antarcticus?).

Toward dusk we arrived at Purén and found indeed some place to lie down our heads for the night.

I soon inquired after the Auracaria woods or Pinales as they call them, but was grieviously disappointed to hear after no end of inquiry, that they could not be reached from Purén.

The apparently most sensible advice I could get was that we should return to Los Sauces and from there take train to *Angol* from which last place the Pinales would probably be within riding distance.

We now decided to stop one day at Purén and to make an excursion to the lake Lanalhue. So next morning having got some horses we rode out to this effect.

The way took us over some mountains overgrown with forests. In the trees I saw for the first time in Chili the beautiful flowering Kreeper, *Lapageria rosea*.

Its large red bell-like flowers were seen almost everywhere. The flowers are very thick of texture and full of moisture so that they keep fresh a long time after having been picked.

This is their undoing. The settlers gather whole quantities of them and hang them up in their rooms without giving them water. Treated in this cruel way they manage to linger on for several days before they wither. In Chili they delight in illusing things they may be beasts, birds or plants!

After some hours riding over the hills, through helas for a good deal burnt, or much injured woodland, the lake came into view. On the way I often saw the beautiful Taenioptera pyrope Kittl. a grey bird of the size of a small thrush, pearl grey with white throat and darker crown. This bird was very inquisitive and would come well forward as we passed. Sometimes it would take a short cut and perch on some bare branch in front of us to see us pass a second time.

From Contulmo which lays in a plain about 11/2 mile Notes from the Leyden Museum. Vol. XXXV.

distant from the lake I started on foot to reach it.

The road was bordered by hedges and in them were numbers of *Diucas*, some *Zonotrichia pileata* and a number of *Sycalis arvensis* Kittl.

A little brown bird like a Wren with a long flowing tail crossed the road but I could not get a good view of it as it disappeared in the tangle of bushes and bamboos, probably Sylviothorhynchus desmuri. The lake had a shallow shore covered with pebbles at the place were I reached it, but more to the left steep rocks came near it.

In the water grew large patches of rushes and between it, or in open spaces I saw three large *Podiceps* probably *Podiceps major* and some Coots, probably *Fulica leucoptera*, with yellow shields.

A Turkey Vulture flew overhead whilst some white backed Swallows skimmed over the water.

Some birds like Wheat-ears with rufus backs were on the stones and pebbles of the shore.

After having looked at my birds I went back to *Contulmo* where we got some lunch and towards evening were back at Purén.

Next morning early we bestrode our horses again to go back to Los Sauces.

About half way there was on the left side a damp green meadow transversed by a small stream against the slope of the *Maritime Andes*. The road was on an elevation and to the right there were undulating dry fields with a greenish bit in the midst of them.

As I was nearing the top of the hill I noticed two pairs of big Birds that came slowly flying in my direction. The birds were Geese, I did not doubt this one moment but only thinking of the to me familiar flight of the Magellanic Goose I did not at first realize what they were.

They looked much heavier and shorter than the Magellanic Goose and crossing my way alighted into the green field to my left.

Here they were greeted by a number of birds of the same species and now the light falling well on them I saw

they were all blackwinged or Andean Geese (Bern. melanoptera). I could even see some of the birds showing off, puffing themselves up as a tame bird which I had kept many years used to do.

I was not a little pleased to see these Geese in their native haunts and as I stopped I saw them quietly grazing towards me the white and black very conspicuous.

In the museum of Santiago there is a *chick* in down of *Bernicla melanoptera* (Marked Febr. 26th, Cordilleras de Santiago) which is coloured as follows:

White, a black line from the frontal base of the bill over the head the neck and the back over the tail (so that the tail is black).

Black cross line over the wings and a black spot over each thigh.

A black spot over each ear.

A young bird of the year in its first dress is similar to the adults, but the black spots on the wings are not so dark and not so well defined. All the black is more brownish. There is no difference in the colour of the sexes in the adults, but the female seems to be slightly smaller.

To complete the sight some beautiful *Blackfaced Ibisses* (Theristicus melanops) now came near. They were most ornamental with their buff ad grey plumage and rosy legs, — and also some Cayenne Plovers appeared, noisy as usual.

After having let the birds come as near as they would I could stay no longer but went on after my companions and after having again passed innumerable *Chimangos* and perhaps the same *Black Waterrail* we reached after a three hours ride Los Sauces station.

My companions having declared that they gave up the search of the *Auracaria woods* I decided to leave alone the train at *Angol* after having arranged to pick them up again farther on.

Angol station had a hopeful look for me as the courtyard was planted with *Auracarias* which however belonged to a brazilian species.

Angol which has a cavalry regiment is rather a pretty place as far as Chilian towns go.

A biggish river streams across it and is spanned by a stone bridge which one has to pass before entering the town.

The hôtel I went to, was kept by a Frenchman or better by a man whose father had come from France and who spoke French fluently.

My first question, after having admired the truly magnificient orange trees in the courtyard, was after the Auracaria woods.

I had good luck this time!

"You are just coming to the right man", was the smiling answer. "I cut a bit of forest some ten years ago and that was not far from the "Pinales" (woods of Auracaria imbricata).

"How far away is it"? was my answer.

"Oh you will have to ride at least 5 hours to get there, it will take you a couple of hours to see the woods and it will take another 5 to get back. So it will take you just 12 hours to ride! if you care to do that"!

I was only too glad to hear that the thing could be done. It was Saturday, my host promised me a good horse for the Monday morning at 6 a m. and a mounted guide to show me the way, and would arrange some food for the day.

So every thing was settled apparently for the best, but on Sunday chancing to speak to a Chilian gentleman who lived in those parts and telling him my plans, I was rather taken aback by the view he took of my expedition.

"Have you an armed escort?" was his first question.

No I certainly had not thought about that and did not have one.

I answered him to this effect and he said quietly "well take the advice of a man of the country and don't go, it might cost you your life. No one lives in those mountains and the only people you may meet will be robbers, I would not go for any thing!"

I did not like to give up my Pinales and told him so.

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Later in the day the Chilian and myself happened to meet again at a nursery garden not far from Angol and there my friend talked to the proprietor about my — as he called it — "rash plans".

I did not get much encouragement here and the proprietor united his advice with my friends to desist from my "rash undertaking".

As I persisted the last advice was "go to the man in command of the garrison and get an armed escort!"

I promised to think it over and in the meantime we visited the gardens.

Amongst the flowering Fuchsias were several *Humming-birds* of the species I saw at Santiago. — In some bushes was the curious *Wren* and yet *Tit-*like *Anaeretes parulus* with its curious forward bent crest (the crest is not divided as in Keuleman's illustration of that bird in Crawshays birds of Tierra del Fuego, but is held together like a small horn), a restless weak-looking little bird, but quite tame.

Near a fountain I saw for the first time the quaint white eyebrowed Cinclodes (fuscus or patagonicus) which walked busily in front of me on a garden walk.

In an open meadow were a lot of small birds amongst whom were very conspicuous the beautiful redbacked *Lessonia nigra*.

Near the houses there were some *Diucas*, and a large brown Wren with rufous tail slippped through the bushes.

Having come back to Angol I set out to find the commander of the garrison and after some inquiry found him playing cards in his club.

Having told him of my wants through an interpretor I soon found out that I had little to hope from him. He told me that he was very sorry but that horses and men were tired as they had just come back from the manœuvres so that he could not help me.

So there was nothing left to me but to go alone with my guide or not to go at all.

I decided on the first course and next morning at six I started on my journey with my ruffian looking guide.

A large revolver carried conspicuously along my side was to take the place of the escort!

The country was perfectly beautiful in the early morning, and as we ascended the mountains after having left the town I got a fine view of the flat country surrounding Angol, the *river* winding through it like a silver thread.

On the big waggon track which we followed we met numberless waggons drawn by stout oxen who had fetched timber from the mountains.

Towards the top of this first range of Mountains the vegetation gets more and more dense and soon we are in the midst of the forest. The woods consist mostly of beeches with small hard leaves and all sorts of beautiful, partly flowering, shrubs form the underwood. Along the road the beautiful Lapageria rosea forms tangles in the small trees or bushes.

We get over one mountain range after the other gradually getting higher.

Along a mountain stream I see a beautiful bird, what looked like a white headed black and brown longtailed Tit. In a parasitic redflowering bush which grows on the trees like the mistletoe here, I see constantly the Goldencrowned Hummingbird.

In an open space far into the forest I see a *Puma* sneak away at our approach.

At last after having ridden some hours and having met no one my guide points to some distant hills saying "Pinales". And here they were indeed the long looked for Auracaria-woods. The trees stood like mighty parasols on the top of the mountain range against the clear sky and the whole of the upper half of those mountains was covered by them.

On we go, mile after mile with those woods in view. We pass some huts where some black looking halfcaste Indians are burning charcoal and who take no notice of me. We cross an open space where a small stream is running through and where some Lapuings are playing and now have to ascend a steep forest clad hill. The road is an old torrent run dry and the woods on the right and left are one

tangle of bamboos which ascend high into the trees hanging in graceful festoons from one giant tree to the other.

Having passed this wood we get to thin brushwood and after having got a little higher we are against the mountainrange that carries the Auracarias.

At first we meet a single tree but gradually they become more and more numerous and the higher we climb, the finer the trees become.

At last when I reach the top of the range we are in the midst of the Auracarias. Some small shrubs grow at their feet but there are no other trees.

I look at my watch; we have just ridden 5 hours.

The trees must be extremely old, some of them have a girth of  $\pm$  10 feet but are not very high. The old trees have branches only at the top forming an enormous parasol. The stems are covered by big black scales like the skin of a crocodile magnified.

The upper part of the stem and the oldest branches are mostly covered by a long white Lichen which hangs in clusters downwards. In some, the upperbranches look very stiff and rigid, in others they are longer and softer looking and hang lower down.

In some the stem has formed a side crown about half way to the top.

The trees grow in groups among the rocks and the best ones are on the top of the hills. The whole aspect of the forest is most ancient and extraordinary and if one should meet a Mastodont amongst those weirdlooking trees one would not be surprised!

The trees are either male or female which is visible by the flowers or cones but there is no difference in the shape of the male or female trees.

Some of the female trees carry ripe cones full of seeds. As it was impossible to climb the savageprickly branches my guide threw stones against some of the ripe cones which fell to pieces as soon as they were touched in the same way as the ripe cones of the silver fir do, scattering the seeds and the scales on the ground.

A Vulture draws circles overhead.

After having wandered through the forest a couple of hours and having seen that besides on the range I was on, there was another mountain range with Auracarias on its upper half to the west, I tell my guide that I want to go home.

The rather unexpected answer is that he has lost his direction!

As I had however taken good care not to loose mine and told him so, he soon got hold of the direction again and we were soon on the track that we had left when we entered the forest.

Another 5 hours ride through all the wild scenery took us home to Angol where we arrived just as the evening was setting in after a 12 hours ride.

The revolver remained unused, except the charcoalburners not a soul was seen after we left the neighbourhood of Angol and the wonders of the ancient Auracaria forest well repaid me for my ride!

Next day I left Angol taking the train to Ossorno which is the southern end of the railway. At the place where the train branches off from Renaico to Ossorno the railway-bank is overgrown with Gunnera scabra in all sizes.

This plant as I afterwards found has the power to adapt itself wonderfully to circumstances. In damp warm spots it grows leaves 5—6 feet high and more. In dry exposed places it makes clumps scarcely larger than a big daisy.

I arrived in Ossorno during the evening, and next morning when I looked out of my window I saw dozens of black Vultures sunning themselves on the roofs opposite. The white shafts in their wing feathers looked quite ornamental. As they sat with extended wings they formed a yellowish white spot. Ossorno with one a little doubtful exception is the most southern place where I met with Cathartes atrata whilst I saw Cathartes aura as far south as the Smith channel near the straits of Magellan.

From Ossorno I took a horse to ride to Puerto Octay.

This is a trip of about 60 KM, and one mostly rides through

forest land. Part of the woods is burnt or much injured by fire, part of it is more or less untouched but every where the vegetation is most luxuriant. Besides the beeches quite a feature in those woods are the enormous Eucryphia pinnatifolia trees which at the time of my visit were in full flower carrying berries at the same time. The flowers are like large white apple blossoms and make a beautiful show. In many places the waggon road is bordered by enormous masses of European Brambles (Rubus) which have run wild. They carry delightfully sweet fruit which are also much appreciated by the birds.

So I saw repeatedly small numbers of the beautiful *Phytotoma rara* feeding on the fruit.

Turdus magellanicus was also very numerous whilst Diucas were everywhere where houses were near.

In these big woods the Longbilled Parrakeet, Henicognathus leptorhynchus, is very numerous. One generally sees them flying about at great height screaming constantly in small flights of from 2 to 10 or more individuals.

They perch in the tops of the tall *Eucryphia* trees, "Urmus", and it is my impression that they feed on the berries.

Some flocks of *Molothrus* and *Military Starlings* were also seen whilst little flocks of *Chrysomitris barbata* often were in the lower trees bordering the road.

In the bigger trees, Colaptes pitius Mol., a grey Woodpecker with white lower back was often seen in small families of about 5 or 6 individuals. These Woodpeckers are always going about in small \*parties\* at this season of the year and I cannot remember ever having seen a single individual.

In the evening I reached *Puerto Octay* by a beautiful moonlight and had no little difficulty in finding accommodation for the night. However, after having been sent from Pontius to Pilate I at last found a lodging in the house of a German widow who gave me a very nice clean room. Next morning I took a boat to get across the *lake Llanquihué* to *Puerto Varas* were I was to find my companions.

The Llanquihué lake is very large and is surrounded by beautiful mountains.

First among them is the snow clad cone of the Ossorno vulcano which very much resembles the renowned Fugivulcano of Japan.

On the lake I saw several pairs of *large Grebes* (probably *Podiceps major*), some of them with a pair of full grown young ones which they were feeding with much solicitude.

In good time I arrived at *Puerto Varas* where I found my friends who had not done much good since they left me.

Puerto Varas is even better situated than Puerto Octay as the country round it is much prettier and the view of the mountains much better.

Next morning we took ship again to Ensenada los Volcan with the object of pushing on to the Nahuel Huapi lake on the argentine side of the Cordilleras.

The first thing that strikes one on landing at Ensenada is that every thing is lava there.

In fact we are in the neighbourhood there of several mighty vulcanos, the Ossorno being the nearest one.

We got mules at this place which we mounted with the object of riding to the *Todos los Santos* lake which we were to cross by steamer to reach *Peulla* where we were to pass the night.

Between the two lakes mentioned the country was most beautiful. On our left was the Ossorno. At first the land was flat and was overgrown by young trees. Several Eucryphias were in full flower whilst Fuchsias, Escallonias, Pernettyas, Barbery's and Gunneras formed an undergrowth.

We went on quite straight for a while then turned to the left along a wild mountain stream on our right and slightly began to rise. We first crossed some thin woods then came to an open space where the road crossed an old lavacourse. The lava had run in one mighty slope from the Crater to the valley cutting through everything so that in some places steep walls were formed on both sides.

Against these walls grew lots of stunted Gunneras, whilst

the bed of the lava itself was almost devoid of vegetation. The only thing that seemed to thrive or be able to live on this comparatively new lava were numberless bushes of *Pernettyas*. The bushes were full of berries in all colours, some were blueish, some were pink, some were nearly black and some were pure white.

Near this place the mountain stream was wilder than ever, rushing between the rocks in a torrential way.

Here a welcome sight awaited me.

On a big piece of rock in the wildest place of the torrent were eight Merganetta andina.

Five were males and three were females, easily known by their rufous colour.

They were sitting very upright much like Cormorans. When they saw me they jumped right into the seething water and although with their heads towards the fall of the water, managed to stay almost in the same place looking at me all the while. After a time they swam to another rock, jumped upon it, jumped off again into the torrent, dived under to reappear at a small distance, and in the end hid themselves behind some other rocks. They did not attempt to fly as I got nearer.

It was almost dark as we reached *Petrohué* on the lake Todos los Santos and before the horses and everything was got into the little steamer it was quite dark, but soon a glorious moon illuminated the landscape. About three hours later we landed at *Peulla* where we found a very comfortable inn kept by Germans.

Next morning I could admire all the beauties of this lake and its mountain scenery round it in brilliant sunshine.

Behind the inn, a little up the mountain was a narrow cut between the rocks, along which a mountain stream came down forming in one spot a lovely waterfall a kind of "Staubbach".

All the rocks around were overgrown with splendid Ferns and Fuchsias and as I waited a little, an occasional Goldencrowned Hummingbird would suddenly appear

and as suddenly disappear after having searched the Fuchsia flowers.

A beautifull *prickly shrub* or small tree with dark green shining leaves and lovely bright blue berries was quite common here.

Here for the first time I saw a bird which till now had only been a wandering voice.

In the bushes I had often been surprised by a kind of peal of laughter close by me, but had never been able to see the author.

Here the bird was less shy and I saw that the noise came from *Pteroptochus rubecula*.

This is a lovely brown bird with redbrown breast about double the size of our Robin.

It is very much shaped like our own brown Wren but also approaches the Robin in shape. It is very common in the woods of Chili but although it is heard so often it is seldom seen.

I followed the little stream as far as I could and was delighted with the lovely wild scenery.

In the lake were numerous Chilian Pintails (Dafila spinicauda) and two kinds of Podiceps and in the ditches a good many Cinclodes fuscus.

In a low meadow near the lake were a lot of small birds and the lovely Lessonia nigra was again present.

Following the course of the river with its bamboogrown banks I came across six specimens of the beautiful Anas specularis.

The people of Peulla call them Geese as they are so much larger than the little Pintails.

From Peulla I rode to Casa *Pangui* which was to be our last restingpoint before we crossed the Cordilleras to reach the Nahuel Huapi lake.

The road leads through beautiful woods which grow in the valley along the river. The river is a wild mountain stream which has the inconvenient proclivity to *change its* course and extend very often.

The result is that it takes away road and bridges which have been made at great cost.

The river had just been moving a few days before my visit and the result was that it had to be *forded* repeatedly, and, as the riverbed was full of deep holes, it was not always very pleasant.

Having crossed the river a last time in a place where it filled the whole bottom of the valley we arrived at Casa Pangui where we were to pass the night.

I was greeted there by numerous flocks of the Longbilled Parrakeets and in some rubbish near the house I saw a couple of Zonotrichia pileata with very light grey heads belonging to the form Zonotrichia canicapilla.

They were much prettier than the more northern birds I had seen.

Casa Pangui has a beautiful situation. In full view are the glaciers of the Tronador and the forest around it is extremely beautiful.

Very much seen there is a small tree with red smooth bark carrying clusters of white flowers like big Myrtles.

I saw several large wine coloured Pigeons in those woods and a small grey Woodpecker (Picus lignarius Mol.).

From Casa Pangui we rode over the pass to the other side of the Cordilleras which are not very high there, and embarked in a small steamer to cross the *Laguna Fria* which is a beautiful small lake surrounded by mountains. After having crossed this lake we walked through splendid woods mostly consisting of *Fitzroya patagonica* and other trees resembling *Yews*, and then reached *Puerto Blest* on the *Nahuel Huapi lake*.

We crossed the lake and ascending along a mountain stream reached the little lake of *Los Cantaros* which lying as it does amongst the wildest rocky mountains is a sight never to forget.

Near the lake was the *largest Fitzroya patagonica* which I have seen and a magnificent giant it was.

In the stream I saw a female Merganetta which allowed itself to be approached quite near.

From Puerto Blest we returned the same way we had come to Puerto Varas. On repassing the Ossorno my guide

drew my attention to a *cloud* of *smoke* which escaped from one of the flanks of the Volcano and he remarked that this was nearly always to be seen.

In Puerto Varas I resolved to stop a day in order to be able to ride to *Puerto Montt* and so to see something of the surrounding country.

Accordingly next morning being 25th March I hired a horse and rode out in Southern direction following the high road to Puerto Montt. — The road at first led through open country more or less hilly and the road as is usual in Chili was of the worst kind.

In de neighbourhood of Puerto Varas the *Diucas* were very numerous and an occasional pair of *Zonotrichia pileata* of the usual dark form was with them.

The Chimangos were also my constant companions along the road.

After about half an hours ride I crossed a stream by a bridge which was of the usual Chilian pattern, namely it consisted of a number of loose stout planks laid on the supporting framework. These were so full of holes that a pair of oxen spanned before a waggon, flatly refused to cross the bridge for fear of getting through.

Near the stream was a small cabin, and a tame *Long-billed Parrakeet* belonging to it, was washing its head in the river.

My horse carefully got over the bad bridge and following the road we passed some enclosed fields. In one of them a flock of some fifty *Blackfaced Ibisses* had alighted. They walked about with the greatest unconcern of my presence looking for grubs or insects, and their buff and grey plumage and rosy coloured legs made a fine show.

I now passed through the remains of some primeval forest which had been burnt down and of which the tree-stumps were still standing. Some of them were of enormous size, some 2 à 3 yards across and as they were partly rotten they supported some of them quite a small garden of flowering Fuchsias or Darwins Barberies etc.

After about 21/2 hours ride I came to a last rise in the Notes from the Leyden Museum, Vol. XXXV.

ground and as I reached the top, the sea lay in front of me and in a deep lovely bay on my right the town of *Puerto Montt*. In front some small islands were visible and in the distant haze was the contour of *Chiloe*.

It was a lovely sight. The town itself is built as nearly all South-American towns, on the square system, and the houses are all built of wood and sheet iron and are mostly one story high.

The streets were wide and dusty and the "trottoirs" were raised and kept by a square wooden beam on which I noticed horseshoes fastened in such a way as to form rings, and I afterwards saw that the use of them was to fasten the saddlehorses to them, whilst their masters were about their business.

The inn of Puerto Montt contained a small courtyard in which a *Gull*, a *White Egret* and a *female Ashyheaded Goose* looked very sad and out of place.

Leaving Puerto Montt I went westwards to visit a German settler who owned a property about 1½ hour away. The road led again after I had ascended some higher ground amongst the ghastly looking remains of burnt forest. I had been told to follow the road until I passed two lakes and eventually I reached the first of the two. This would have been a lovely spot from its shape, if everything round it had not been burnt down.

After a while I passed the second lake and shortly after this the road entered a beautiful unharmed forest.

I had been told to look for a gate and after a while the gate appeared and passing through it I entered the forest which still showed all its original beauty.

The road was nothing else than the bed of a stream which after the Chilian fashion of streams had for some reason or other *changed* its *course*, and was winding through the forest in a most eccentric way.

The ground was rather damp and many of the old trees were covered with *Ferns* and *Lichens*, some were white and hanging down in fringes, others brownish green growing in cushions and patches, *Fuchsias* were very luxuriant and

on many of the trees were bushes of a parasitic plant with pale scarlet pipeflowers and oval leaves.

On an old tree hanging sideways were clumps of a kind Bromelia with glorious scarlet centres (Bromelia bicolor Ruiz & Par.).

After having admired these and so many other things I heard the usual mocking laugh of the Brown Robin, Pteroptochus rubecula. This bird instead of disappearing after having thus challenged the passer by as his kind usually does, came forward and perched in a conspicuous place on some tangle of dead wood to look at me. In this way I could admire in close proximity his yellowred breast and eyebrous and big glittering dark eyes. I stopped to look at it but it did not mind it in the least.

As I went on a little brownblack Wren (Scytalopus magellanicus), larger than our own bird but with not quite such an upright tail, crossed the road and disappeared in the jungle.

After a while the wood became thinner and at a curve of the road gave way to bamboo bushes with open spaces between them.

Turning to the right the ground rose and on an eminence clad with grass stood the house and farmbuildings, all low constructions of wood and sheet iron.

I opened the gate in a wooden fence, entered it and rode to a door that stood ajar.

After a while somebody came forward and told me that the owner would soon be there and asked me to alight.

This I did, leaving the horse to take care of itself as is usual in those parts. The owner having come now showed me his farm in which I noticed the beautiful growth of the fruittrees and he told me that he had reclaimed all his land, it being a virgin forest all over when he took possession of it.

When he showed me his poultry-yard I asked him if the *Foxes* did not play great havock, the virgin forest being quite near.

His answer was that he poisoned them and upon my Notes from the Leyden Museum, Vol. XXXV.

asking him how he did this, he told me to my horror that he did it by spreading poisoned birds.

"We sow poisoned grain every spring he added and this kills many thousands of little birds which we use as bait for the foxes!"

I did not fail to predict him insect-pests without number if he continued to act in this manner, but he only laughed saying that he would get no harvest if he did not poison the little birds!

As he found me interested in birds and trees he advised me to return to Puerto Varas by a *cross country road* which did not touch Puerto Montt, but led entirely across country (for a great part his own estate).

I gladly availed myself of his advice and having mounted my horse which was feeding on the rank grasses near the house I departed on my journey. I at first crossed some grass fields and some others from which the harvest had been gathered and then came into a country thickly grown with *Bamboo bushes* with grass-grown land between them and there I met some nice red cattle.

Very soon after having left the house I saw a clump of enormous trees which from top till bottom were covered with beautiful large white appleblossomlike flowers. My road led me close to this clump of trees but I could not come at the foot of them, the trunks standing in an inpenetrable tangle of bamboos.

They were giant specimens of Eucryphia pinnatifolia or Urmus trees as they call them in those parts and these trees seem to attain their greatest size in this part of Chili.

Riding on I descended a slope to cross a river and entered a virgin forest mostly composed of Urmus trees although there was a great variety of other trees and shrubs, as is usual in those parts of Chili and which makes these woods so lovely (as was already remarked by Darwin in his "Voyage of the Beagle").

These woods were full of longbilled Parrakeets (Henicognathus leptorhynchus) which screamed loudly and were very active flying about in small flocks or perching on the tops of the giant trees. These birds were probably feeding on the seeds of the Urmus trees which are very numerous, and on the countless other seeds and berries as well (the Urmus fruit looks like a small olive).

The woods also resounded from the calls of the large grey white backed Woodpecker, *Colaptes pitius* Mol., which as I mentioned before goes about in *small parties*.

Riding through woods in Chili I had often heard a curious trembling noise in the thickest parts of the forest, but I had never seen the author although the noise followed one.

This time I was more fortunate and saw that it originated from a beautiful goldenbrown and blackbrown little Creeper-like-bird with a white underside which apparently lived in the thickest jungle. This bird is Oxyurus spinicauda (Gmelin) and is quite a feature in the Chilian forest from the way it has of following the traveller.

In the damp places near streams the Fuchsia bushes were very beautiful as well as the finely subdivided *tall Ferns* with black stems. In the Fuchsias one could usually see a goldencrowned *Hummingbird*, which appeared suddenly screaming loudly to hover under the flowers.

It would soon disappear but was back as suddenly.

A little farther several trees had bunches of a beautiful scarlet *flowering parasitic* plant with square bluish green leaves.

Of these flowers the Hummingbirds were also very fond. Riding on I came to a tangle of European Brambles which had spread there in a dreadfull manner and on them quite a flock of Turdus magellanicus were feeding on the berries; some flew away as I came near but a good many were quite tame and suffered me to pass without being disturbed.

I also saw, also feeding on the brambles some *Phytotoma rara*.

In some places the Bamboos grew against the trees to a great height hanging down from the big branches like a creeper.

In some places *Lapageria rosea* was very conspicuous with its wonderful red bell-like flowers.

The beautiful *Tropaeolum speciosum* is also at home in these woods.

As soon as I neared some settlement the *Diucas* and the *Chimangos* were there.

After having left a river, which I had gone along some time, to my left I turned uphill and now passed a cut in the mountain called the "Devils Glen".

In the damp and shelter of this Glen the vegetation was most luxuriant.

All the beautiful evergreens and flowering bushes grew there to perfection, the Fuchsias were enormous and the different species of Ferns most wonderful and splendid also were the tangles of *Gunnera scabra*.

Once having passed the Glen and having gone over the mountain I came to cultivated country and soon saw Puerto Varas on the delightful lake of *Llanquihue*, before me, the snowclad *Ossorno* vulcano and other giants cutting against the clear eveningsky.

I had decided to go north again next day taking the steamer to Puerto Octay from which place I would ride to Ossorno.

An hour before I left next morning I noticed near the inn a tame Longbilled Parrakeet which with stunted wings and tail, as is done to every bird those people keep, was sitting in front of a small house. The little bird which was quite tame was offered to me for a couple of pesos as soon as the owner saw I noticed it, and rather foolishly unmindful of all the miles that separated me from home, I could not resist the temptation and bought the bird.

I carried him home in my hand and as no such a thing as a cage was to be got anywhere, I with great difficulty arranged a little box to put him in.

This was just done when I had to go on board of the steamer with all my belongings.

The crossing was uneventful. We passed plenty of large *Grebes*, and in the evening reached Puerto Octay. Horses

having been ordered and the big luggage having been dispatched by oxen cart we turned in and next morning we started on our ride to Ossorno. Now the first difficulty with my "lorito" began. How was he to travel?

I suggested to the péon that he should fasten the box on the packhorse who carried my valise but the man who as a rare exception apparently was fond of birds, was horrified at the idea saying that it would shake the bird far too much and that he was quite willing to carry the box in his hand.

This certainly was the best way and I gladly accepted his proposition.

The man was as good as his word and carried the bird the whole 60 Km. in his hand, bringing him to Ossorno all right. We followed the same road as some days ago when we had come, only a pouring rain the whole day made the ride far from pleasant and the road almost unpassable.

We passed large flocks of *Phryg. aldunatii* and of *Long-billed Parrakeets*.

In Ossorno I asked the innkeeper where I could get a second Parrakeet as a companion to my own and the answer was that the only way to get one was to walk through the streets and listen for the screams of a bird of that kind. Then to enter the house and ask if it was for sale. "You are sure to get one", the man said, "they dont care much for birds here and will be glad to part with it."

I followed the advice and after having walked through the streets for some time I heard the screams I was wanting to hear. I went to the door of a bookseller thinking the bird was there, but heard it was in his neighbours house.

There I went, asked to see the bird and in ten minutes later was the happy owner for one peso." It belongs to my child said the woman (a millener) but he don't care about it any longer and I shall be glad to get rid of it!"

So off I carried my prize and took it to the hôtel were I introduced it to the other bird. A great battle followed but fortunately nothing happened and as I had to leave

soon after, I put both birds in the box and took them away with me to the train. The carrying about quieted their tempers and they have been great friends ever after and are I believe a true pair.

In Valdivia I had a better box made for them and as we intended to take a steamer at Corral to go south by sea, we started in that direction next afternoon by river boat, including luggage and "loritos".

That same evening I took a walk at Corral along the bank of the river where it runs into the Sea. It was 5 o'clock, the sky was clouded and the wind was very cold. I was therefore surprised to see the *Golden-crowned Humming-birds* as active as ever in the Fuchsia bushes.

Everywhere along the waters edge were a good many Cinclodes patagonicus Gmelin. They were very active and most amusing. When one bird suddenly met another, they would jerk their tails, puff themselves up and bow to each other. They apparently fed on the insects and grubs that the low tide made available amongst the rocks and stones.

The rocks which were partly covered by peat were in some places overgrown by the same redcentered Bromelia which I had seen on old rotten tree trunks in the woods near Puerto Montt.

In the course of the morning next day the "Negada" a ship of the german Cosmosline arrived in the port of Corral and we were so fortunate as to get good accomodation there. Whilst the ship was taking in passengers and some cargo I noticed a *Pinguin(Spheniscus magellanicus)* which was fishing near the ship quite unmindful of the noise.

A little past midday the ship started on the course southward.

As we left the entrance of the Valdivia-river to enter the Pacific we passed a whaling station were a good many Gulls were seen, doubtlessly busy with the offal of the whales. At this time we met a lot of giant Seaweeds which were floating in the sea. Some of them formed big

tangles and were kept floating by means of swellings as large as a nut, which were filled with air.

The colour of these weeds was brown.

We left the coast of Chili and went south, almost and sometimes quite out of sight of the land.

Two species of Albatros (Diomedea exulans and Diom. melanophrys) now made their appearance and were almost constantly in sight of the vessel.

Occasionally a giant Petrel, Ossifraga gigantea, flew round the ship and was very beautiful with its sooty black plumage and ivory-yellow bill.

They are enormous birds on the wing and look as large as the smaller Albatros.

The spouting of whales was also seen very often but being hunted relentlessly all the year round, they have become very shy.

On the fourth day Cape Pigeons, Daption capensis flew around the vessel, and extremely pretty birds they are. Besides great numbers of Majaqueus aequinoctialis several

Thal, furcata were constantly seen, also other Petrels.

At the beginning of the fourth day I believe, we entered the straits of Magellan, and the weather being clear could admire the wonderful scenery. On both sides the coast is visible and forest clad mountains alternate with barren rocks and glaciers which come right down into the sea. On several occasion a Sea Lion, Arctocephalus australis, was seen swimming not very far from the vessel. It would lift a great part of its body out of the water to survey the vessel and then would swim away with great strength. It was quite a sight to see him go through the water. These animals I am sorry to say are much persecuted in the time that they have young ones and are on land.

Pinguins (Sphen, magellanicus) were very numerous and were swimming behind each other in long strings.

The White Breasted Cormoran, Phal. albiventer, was often seen flying over the water and a black Procellaria was numerous.

The forest consited mainly of the Antarctic Beech and Notes from the Leyden Museum, Vol. XXXV. there were also big patches of *Fitzroya patagonica*. Some of the rocks were overgrown with mosses of a rufus tinge and which I was told grew to a height of nearly two feet.

After having passed a narrow turning between Dausson island on the right and the southern part of Brunswick peninsula ont the left we passed Port Famine on that same peninsula and now got into wider water and in the course of the day, early after noon reached Punta Arenas.

During the voyage from Corral I had decided not to go on with the "Negada" to Montevideo but to land at Punta Arenas in order to see something of *Tierra del Fuego*. —

My companions not being inclined to this course we parted at Punta Arenas were I landed alone. —

As the ship was lying in the harbour I noticed some very pretty small shellfishes of a scarlet colour that were swimming in shoals round the ship. They looked very much like a Japanese Goldfish that would be swimming with its bigs fins forward.

So I landed with my belongings on the pier and found a room in the Kosmoshôtel which stands in the immediate proximity of the Sea.

The weather was fine but the wind was icy cold.

Next morning I started for a general survey of the town. The town is built against the slope of the hills. The oldest part stands near the sea, the more recent buildings are higher up.

There once was an *enormous forest* round Punta Arenas but fires (three years ago there was a forest-fire that lasted 6 months) have completely distroyed it, so that the town is surrounded now by ghastly looking black tree trunks that stand out dispairingly against the sky.

Going about the town and its surrounding country I was struck by the complete absence of any landbird. The only birds I saw, were in confinement, they were a few caged Chrysomitris barbata, one Frigilus gayi, three Bernicla dispar, two young Rhea darwini, one Theristicus melanops and a black Rail.

There is a convent in the town of roman catholic "padres."

Notes from the Leyden Museum, Vol. XXXV.

One of them, padre Borgatello has succeeded in getting together a very interesting collection of natural history objects, including a fine local collection of birds and manmals and objects referring to the now vanishing Indian population.

The padre thought much of the skin of a horse (in date

1899) which was woolly like a Guanaco-skin.

There was also a very interesting collection of *photos* showing *natives* and scenery of Tierra del Fuego.

The *Blackfaced Ibis* which I had seen in the town belonged to this gentleman and its destination was to be stuffed for the Museum. On my request he kindly let me have the bird which is now alive and well in my menagerie.

One morning, being the 6th of April, I set out with an old inhabitant of Punta Arenas to visit the site of a coalmine and some goldwashings in the mountains.

After having left the town behind us we entered the burnt forest and after a while came to the *Rio de los Minos* the course of which we were to follow. Gradually the vegetation improved and as we left all the black misery caused by the fire behind us we got into some fine woods consisting of *Fagus betuloides* with its hard little serrated leaves. The undergrowth consisted chiefly of *Berberis dulcis* bushes which at this time were full of sweet berries.

There was here not nearly so much variety of vegetation as f. i. near Puerto Montt.

Proceeding on our way we passed the rusting remains of a large *dredging-machine* which had been used for washing gold but had been abandoned as it did not pay.

A little farther on we met a young German settler who was known to my guide and who got a scanty lively-hood by washing gold out of the river on his own accord. This man kindly showed me how he got the golddust out of the stream and told me that in that way, having no expenses, he could earn about four shillings a day.

We now entered a cut in the mountain always following the stream and about two hours walk from Punta Arenas we came to the site were the coalmines are.

Not wishing to explore the mines themselves we passed on and about half an hour later we came to a place were two huts showed us the abode of another pair of gold washers.

There was nobody there and so we took the opportunity of visiting one of the huts of which the door stood open.

My companion who had little belief in the industry of the local workmen suggested that the owners of the huts had gone to Punta Arenas to *drink the gold*, which they had rescued from the river.

The hut was of the poorest description. It contained a sort of a bed more fit for a pig than for a man and some cooking ustensiles.

A meagre kitten with a white, grey, black, and red coat came up to me and rubbed itself against my legs.

Outside the hut hung the carcass of a sheep by way of provisions.

As I was looking at the carcass a lot of little birds flew on it and greedily ate of the grease. They were so tame that I could have almost caught them with my hands.

They were all specimens of my old friends Oxyurus spinicauda which had followed me so often invisibly and I was not a little surprised to see them so unmindful of me as they are usually only heard but very seldom seen. Probably they were accustomed to feed on the grease of the lamb and not being disturbed by the owner of the hut had got so tame as I found them to be.

This was an excellent opportunity to see the birds close by and I could not but admire the rich goldenyellow and brown stripes of the head. In these birds the underside was silky white and during my visit to S. America I have always seen them like that in a state of nature. As I have however seen a stuffed bird with a yellow underside and as the inhabitants call them Citronbirds I suppose that in the breedingseason the white underparts change into yellow.

After having admired the birds and fed the kitten with some of the meat we returned to the riverbed where in some shallows the *golddust* was clearly visible, and followed its course for a little longer.

We then found that it was time to turn homeward and followed the same way we had come by.

On the return we came across some rocks which were entirely formed of large fossil shells showing that they, now being in the hills, had once formed part of the sea bottom from which they had been uplifted. The shells looked mostly like oystershells and I took some home with me.

I now also noticed a *parasitic plant* which grew on the branches of the beeches.

They had a brownish yellowish colour and were leafless little broomlike bunches.

In some parts where the berries of *Berberis duleis* were very abundant; there were a good many *Turdus magellanicus* and an inhabitant of Punto Arenas was busy shooting them.

They call these Thrushes Sarcales and say they are very good eating.

Although Conurus smaragdinus was said to me to be numerous in those woods — and near Punto Arenas I saw some in confinement — I did not come across a single specimen I am sorry to say.

Walking over the stones in the stream I saw a bird like a brown Wagtail which I could not identify.

Having got back to Punta Arenas I set about to get some information for my proposed trip to Tierra del Fuego.

I had been told that there was a steamer every day to *Porvenir* but after more close inquiry the agent of the company said that they were *supposed* to cross every day but that they generally only did so once or twice a week and that a boat would probably go next day.

I was also told, after no end of inquiry, as no one seemed to know anything positive about Tierra del Fuego although it was so near, that the only way to travel there was to get introductions to the officers of the Explotadores Company who lived in the different sheep farms.

The general manager of the Company who lives in P. A. and to whom I went, most kindly gave me introductory

letters to this effect whilst I also got one to the director of the Jente Grande Company.

Armed with these letters I went back to my hôtel and leaving there the bulk of my luggage and my two Parrakeets I only took with me a valise and proceeded to the boat which was to start at  $3^{1}/_{2}$  in the afternoon. The little steamer was of the worst description and looked as if the least bit of bad weather would be its undoing.

At the last moment, as we were about to start, a peon arrived with two saddlehorses wishing to get access to the vessel. The captain, a young English speaking Norseman, refused however to give him time to enter the ship saying it was too late.

"I have just got tickets at the office and so I have a right to get into the ship" was the not unreasonable answer. "Then go back to the office and fight it out there" was the rejoinder and off we went leaving the poor man on the pier!

All about the harbour on every buoy or empty boat, were lots of white breasted Cormorans, Phalocrocorax albiventer Less., and as we went on I saw lots op Pinguins, Spheniscus magellanicus, swimming in the sea.

These birds swim in long strings one behind the other and I counted as many as 49 in one string.

They would swim unconcernedly till quite near the vessel. Then they would suddenly take fright and all dive under.

At not much distance they would reappear on the surface, take fright again and dive with a jerk and this would go on until they were far away.

On one occasion as the ship crossed their course and they were quite near, they dived right under the vessel reappearing on the other side.

Their behaviour gave one the impression that they only saw the ship or realized what it was when they were quite near. They were most entertaining to watch and one saw them nearly during the whole crossing of the strait.

There were also plenty of *Blackbacked Gulls* about and also *Terus*.

When we were apparently about half way between Punta Arenas and Tierra del Fuego I asked the captain at what time we were going to land.

"O Sir we will probably not land at all to night, was the unexpected answer. I cross for the first time and the entrance of Porvenir is very difficult, so that if there is a fogg I dare not venture it."

"Where must I spend the night in that case" was my rejoinder.

"O Sir you will have to spend the night on the sofa in the saloon".

As he said this a cold shudder ran through my back. The "sofa" was the dirtiest bench imaginable and the saloon a low stuffy locality full of stinking halfcasts!

"But — continued the captain — if there is no fog and the moon comes out well, I will venture it".

I heartily did pray that the moon would come out!

The moon *did* come out, when we were in proximity of land and my friend the captain said that he would venture the entering of the harbour.

"I am glad of it for your sake" was the goodnatured remark; "It would not have been comfortable for you to spend the night on the sofa of the saloon!"

I heartily acquiesced to this!

As we came nearer the land there still was no vestige of any habitation or entrance and I began to wonder where Porvenir was.

As we were *quite* near I now saw a side entrance of the sea into the land and into it we steered under a glorious moonshine.

I now saw that the captain had not exagerated when he said that the entrance was difficult. We had to follow a zigzag course and to double three or four corners and to evade as I was told, numerous sandplates before at the end of a deep bay the lights of *Porvenir* became visible in the distance.

Near the last turn there was a large sandbank and on it was a large flock of *Upland Geese* (*Chloëphaga dispar*) which quietly saw us pass.

A little further a pair of Steamer Ducks fluttered away from the vessel.

At last we landed at a pier at a good distance from the lights of the "town".

Of course there was no one to help me with my valize, but the kind captain supplied me with a seaman to carry it for me.

The man (an Englishman) got hold of my valise and ran right away from me into the darkness.

Shouting brought him back to me. "Where are you going my friend" I said", I believe I told you I wanted to go to the inn". "Well Sir I was never here before" was the answer. "I don't doubt it" I said "but you surely must suspect that the houses are where we see the lights!"

So asking my shrewd friend to follow me I steered through the darkness to the town hoping to find the inn called "Hotel Alleman".

After a while I succeeded and found the hostess who was a German. She asked if I wanted a first or a second class room and upon my telling her that I wanted her best firstclass room she showed me into a small locality at the end of a long passage which had a bed and a washingstand in it (nothing else).

The room looking clean, I said that I was satisfied and asked her to prepare me some dinner which she promised.

Her husband, an Englishman, having come in, in the meantime, I told him that I wanted to go on to *Jente Grande* next day.

"Then you had better telephone" was the unexpected and welcome answer.

"You can do that at a store close by".

So to the store I went and having used the telephone got a most courteous answer with the offer of a saddle horse and the use of a cart, which took goods to his place from the steamer, for my luggage.

I gladly accepted his offer and went back to my inn hoping to get dinner.

In a cleanlooking room was a dressed tabel on which Notes from the Levden Museum, Vol. XXXV. even flowers were not missing, but the room was *icy* cold although a big stove stood apparently quite ready to burn but had no fire.

Upon my asking the host to light a fire, he answered that the stove did not give warmth, only smoke.

I asked him to try, and in ten minutes volumes of smoke filled the room.

I happened however to know the kind of stove and soon put things right, so that a genial heat replaced the smoke. The host was very much astonished but... fuel is very scarce in some parts of Tierra del Fuego.

I now asked for my dinner but this was not easier to get than the heat and consisted of one egg and a slice of meat and a little bread. Nothing else was to be got! say what I would!

So I went to bed rather hungry enjoining my hostess to get me something more next morning.

This she did and next morning after breakfast I enjoyed the beautiful view of the situation of Porvenir (the capital of Chilian Tierra del Fuego).

The settlement lays at the end of the deep bay which looks more or less *like a lake* and is surrounded by raising ground.

Round the bay were large flocks of *Chloëphaga dispar*. In the water were some pairs of *Steamer Ducks*, and several *pairs* of *Anas cristata* were flying about, often coming quite near.

The male of these last birds seemed a little larger than the female and showed more white in the wing.

They were very pretty birds and quite tame.

I afterwards heard that the bay was a sanctuary where no birds were allowed to be shot.

The Steamer Ducks of the flying small species in the bay also went in pairs and I may as well tell my opinion and my experience at once of these birds.

It is a subject of controversy amongst ornithologists whether there are one or two species of Steamer Ducks.

It is my opinion that there is not the slightest doubt Notes from the Leyden Museum, Vol. XXXV. that there are two species. Much about it has been talked and written but the differences between the two species have never been properly put on record.

The typical *Tachyeres cinereus*, the Steamer Duck of the Seafarers is a big heavy bird which is quite unable to fly, not only when it is old, but even less so when just full grown. This bird can not even rise above the water but when alarmed gets away by striking *into* the water with its wings so that a great splashing takes place.

They are absolutely confined to the sea and I have seen great numbers of them in the Smith channel. In Eden-harbour Indian reach as many as 42 together. These flocks consisted of pairs of old birds with full grown young of the year.

In this species both sexes are grey. The male has a pale or pearl-grey head and neck and a bright yellow bill. In the female the grey is duller and the head not strikingly paler than the rest of the body. The bill is also yellow but not quite so clear in colour. In the young birds seen by me in the Smith channel and later on in Melinka near the coast of the most northern island of the Chonos-Archipelago the plumage is in some parts tinged with brownish grey, but not enough to hide the grey general aspect. The bill is mixed with dark greenish colour, and the legs are dark.

These birds, evidently birds of the year, as they were under the guidance of a pair of adults, as was very easily seen at Melinka, where they were quite tame, were even heavier or more clumsy-looking than the old birds and could most certainly not fly. They are expert divers.

I killed a young male at Eden-harbour and skinned it. The stomach was full of ground crabs or crustaceans. There were enormously powerful muscles over the cranium and very small ones on the breast which carried a very shallow keel.

The second or flying species is quite a different bird. To begin with, both sexes are much smaller than the preceding one and the female is much smaller than the male. The female is also coloured quite differently.

The male which is the larger of the two is clear grey with a white breast and clear yellow bill. The tail is elongated and the point carried upright when he swims.

The female is much smaller than the male. The head is brown and the rest of the body of a beautiful *wine* colour with white breast. The bill is *brown*. I saw small flocks of these birds on the seashore near Jente Grande and a good many pairs on the lagoons inland.

I saw these birds fly repeatedly high over head; at the sea coast I saw them fly from the lakes inland towards the shore and vice-versa.

I have not seen a single bird of the non-flying species in this part of Tierra del Fuego.

My kind hosts at Jente Grande who most kindly helped me in my researches, where quite convinced of the validity of the two species. So was mr. Cameron the director of the Jente Grande Company.

The small kind is found a good deal inland, they told me, but the big one is entirely confined to the sea. This quite agrees with my observations.

A female and a young male of the non-flying small species (both from the Falklands) are in the Leyden museum and there is an adult pair of this kind in the Buenos Ayres museum and there are several females in the British museum.

In the lagoons round Jente Grande the birds were very tame and if I rode round a lagoon or stood on the edge of the water the pairs of small Steamer Ducks would come quite near to look at me.

The white speculum in the wing is present in both species.

When alarmed these birds sometimes get over the water without getting quite clear of it. They then rise over the water touching it with the *points* of their wings as they fly away.

This is however a quite different way of progressing from what the *Tach. cinereus* does. It resembles the way a coot sometimes gets away. The *Tach. cinereus* does not

succeed in *rising its heavy body* out of the water but strikes with both wings right *into* it making a great splashing.

Returning to the fine clear day on which I admired the Porvenir bay, I saw some movement on the opposite side in a farmhouse. A small waggon was taken out and a pair of horses were harnessed to it and a little later a white saddle horse was brought forward.

Half an hour later the waggon was seen advancing in my direction and a man was seen mounting the white horse.

This seemed not to be an easy matter as the creature resented this very much.

Once the man on his back he advanced with jerks and starts with his nose right into the air. However after a while both waggon and mounted man were at my door.

My valise was put into the waggon and I mounted the white horse after his former rider had descended.

The waggon was to show me the way so it was all very easy and I followed at some distance.

We first ascended the hills behind Porvenir and then got on some undulating ground grown with short grass and low bushes but quite without trees.

We soon got along a little piece of water where a lot of *Chloëphaga dispar* were running about, feeding on the short grass and letting us pass without being disturbed in the least.

We still mounted higher and now I got a good view of the country most beautiful in its wild loneliness. Undulating country without an end to it, all in short grass with low bushes untill everything was lost in the purple of the horizon!

We pass several lagoons, some are large and intricate in shape with deep bays, high promontories and outstanding islets. Others are round and have smooth margins like an ornamental lake in a park of old Europe. Sometimes only a part is round like this, whilst in some other part they run on getting irregular in shape and full of corners and bends.

In one part of a large lagoon we passed, were great numbers of *Coscoroba Swans* who challenged me with their call of "Coscoroba!" when I got near.

In the different museums of South-America which I visited I found only fairly large chicks of Coscoroba candida which had lost the markings of the newly hatched chicks. These young birds were yellowish grey. I am therefore very much pleased to be able to figure, through the kindness of the Duchess of Bedford, a newly hatched chick of this species which was bred at Woburn. See pl. I and II.

I have always regarded the so called *Coscoroba Swan* as a gigantic Tree Duck and the character of the head markings found on the chick go far to prove that I was more or less correct in my surmise.

In fact the markings on the chick figured combine the markings of the *Shell Duck* chick with those of the *Tree Duck*.

The headmarkings show a good deal of the characteristics of the Tree-Duck chicks markings, whilst the pattern on the body is almost identical with those found on a chick in down of the Shell Duck.

Thousands of *Upland Geese* (*Chl. dispar*) were running everywhere and a good many *Antarctic Ducks* (*Anas cristata*) were on the margin and in the lake.

All the birds were tame and I could get quite near them. Having admired them for a while I rode on, and having passed over some higher ground I came to another piece of water, probably another arm of the same lagoon and there great numbers of *Blacknecked Swans* greeted my view.

It was a lovely sight. In the water are some little islands and everywhere are *Blacknecked Swans* with only an occasional *Coscoroba* amongst them, so that it seems probable that both species don't mix very much but keep apart. On the little island, as I heard afterwards, the Blackfaced Ibissos breed.

The swans were tame like the Coscorobas and I could ride to the margin of the lake without their taking wing. Having left the Blacknecks I ride on after my guide and

pass flock upon flock of Upland Geese, Chloëphaga dispar.

This goose is often called the Chilian form of Chloëphaga maqellanica.

This is rather misleading, than although Tierra del Fuego belongs for the greater part to Chili this goose was not found by me in Chili proper.

I have been over a good part of southern Chili but have not seen a single specimen nor have ever heard of it.

Tierra del Fuego on the contrary it inhabits as a resident in countless numbers and if it was not so much persecuted would probably be still more numerous.

As it is, one sees it almost everywhere and it seems to be attracted by the fine grass which is the result of the grazing of the sheep.

This bird is a resident in Tierra del Fuego but every thing about its history is not known, so f. i. several people there told me that these birds had never been found moulting and the common belief was that they did not moult like other geese.

Now as it is quite certain that *Chloëph. dispar* moults its flight feathers like every other goose (*Anseranas melanoleuca* excepted which moults like a hen and can always fly), it only proves that at that critical time the birds wander away to some unknown part of Tierra del Fuego or to some of the adjacent islands where they can moult in peace and security.

This circumstance is probably the only thing that keeps the species going as they would certainly be exterminated if they moulted in the inhabited country.

Amongst all the flocks of *Chloëphaga dispar* I have only seen *very* few white-breasted birds belonging to the allied *Chl. magellanica* of the Falklands. They had probably lost themselves amongst the flocks of *Chl. dispar* and I have not met any number of *Chl. magellanica* together.

At last after having ridden three hours I see a deep bay formed by the sea and not far from it some yellow painted houses with scarlet roofs.

The bay is the "Jente Grande" bay and the houses are Jente Grande settlement, where I am going to spend a few days.

I am welcomed with the greatest kindness by the director of the Jente Grande Company and at luncheon see the whole houseparty.

In the afternoon 2000 sheep must be shipped.

This is done by driving them in small parties onto a narrow bridge which ends on the vessel. At the place where the bridge reaches the vessel the hurdles which border the bridge are so near each other that only one sheep can pass at the time. In this way it is possible to count the sheep and to put them in the prepared divisions which will hold 6 sheep each.

The difficulty is to get one or more sheep to put foot on the bridge but this achieved the others follow in the proverbial way so that a continuous stream of sheep flows into the ship.

The poor creatures will cross the straits to Rio-Secco to be all slaughtered next morning! Next morning I bestride a horse and under the kind guidance of Mr. Aylwin set out to see as much of the birds around *Jente Grande* as possible.

The first thing in the way of birds I see that day are large flocks of *Ruddy Headed Geese* (*Chloëphaga rubidiceps* Scl.) or "Brent" as they call them there.

The birds are grazing on the grass not a hundred yards away from the house and only take wing when I get quite near them to alight a hundred yards further on.

These birds, contrary to the *Upland Geese (Chl. dispar)* which are *residents* on Tierre del Fuego, are *summer visitors* to the country. At the time of my visit (beginning of April) they had gathered into flocks previous to their emigrating and would do this probably in a few days.

I was told that *Chl. poliocephala* who is a scarce breeder and summer visitor in the country sometimes associates with the *Ruddy Headed Geese* in these flocks, but I have myself not seen a single specimen of this goose on Fireland.

Proceeding on our ride we came to a large but apparently very shallow lagoon with flat margins (some of the lagoons are sweet and some are salt).

In it I saw 5 Flamingos (Ph. ignipalliatus) which my guide told me came to the Jente Grande lagoons in autumn to spend the winter there. They were rather shy and flew away as soon as we came near. Whilst I was standing on the waters-edge to look at the Flamingos a big pair of ducks came flying over my head to land or better to alight into the water with a splash not far from where I stood.

They proved to be a pair of the Flying Steamer Duck which I mentioned above. Riding along the waters-edge I observed 5 more pairs of these ducks. As I stood still they all came quite near so that I could well see them. They were all of the same kind, the male light grey, with bright yellow bill and larger, the female wine colour with brown bill and smaller. It was a grand sight!

In the same lagoon stood numbers op *Chl. dispar* in the shallow water, and a good many *Anas cristata* were swimming about. I also saw a specimen of the large *Rednecked Podiceps, Podiceps major*.

Leaving the lake we came into some hilly country, and in a small valley where the bushes had attained a little more size were two old *Carancho nests*.

These nests were built of sticks right from the bottom of the bush entirely filling it up and attaining a height of 5—6 feet.

On the ground, sunning themselves were two big *Eared Ouls* which looked like two cats and were fairly tame (*Bubo magellanicus* or *Asio accipitrinus*).

In that same neigbourhood a beautiful grey bird of prey, probably *Buteo erythronotus*, with white, black-tipped tail flew over the ground and I also met the *Cinnamon Kestrel*, *Tinnunculus cinnamomius* Sw.

In a tall shrub was a small flock of *Black Starlings* (Curaeus aterrimus Kittl.).

The birds were singing lustily in their peculiar busy way.

The *Chimangos* were not very numerous and I only saw a few, which were *large* birds.

In the afternoon I went out on foot and alone to see something of the seabirds along the Jente Grande bay.

Between the house and the sea are some low meadows with water-holes in them. In the dampest places grew an extraordinary looking succulent plant in great masses,

These were of the most vivid scarlet and carmine colour and grew only to the height of a few inches.

Walking along the shore I came to a projection of stones and pebbles and on these were great numbers of the White-breasted Cormoran (Phalacrocorax albiventer), also some small grey blackhooded Gulls with orange yellow bills (Larus scoresbyi Traill) and some Haematopus leucopus (Less. & Garn.).

Turning round a promontory I came upon a large number of the Lesser Steamer Duck of which several flew away at my approach.

They were all of the same species.

A solitary pair of Anas cristatus was near them.

Next day I was to go to Philips Bay, were there is a station of the Explatadores Company, and I was to lunch half way at the second farm of the Jente Grande Company.

It was a glorious morning but a driving icy cold wind.

My road at first took me along the eastern shore of
Jente Grande bay after which I turned inland amongst
lovely scenery.

The country was hilly and wild and grand in its desolation. On a hill on my right a *Guanaco* stands out clear against the sky watching me intendly. I had never before appreciated the wild elegant beauty of the Guanaco. The rich rufus colour of his coat and the black of his head harmonize to perfection with the ruddy grass of the hills.

After he had looked at me for a while he canters away with a beautiful springy gait.

I ride on and turning back after some time I see him again standing on the top of another hill watching me intendly as before.

A little later I see another one. Flocks of *Upland Geese* are everywhere. At about 12 o'clock I see the sea from the top of a hill which I pass, but my road takes me more landwards. I pass a small stream and meet here a flock of a couple of thousand sheep, under the guidance

of two mounted peons and some dogs, which are driven to Philips Bay. A little further I pass another small stream and see a specimen of *Dafila spinicauda* sitting on one of its borders. The bird squats motionless and lets me pass hoping to be unobserved. I don't undeceive it and let it be.

Another turn between some hills and the Jente Grande farm (*Estancia Sarita*) is in front of me and is reached by us in a few minutes.

I alight near the managers house and my horse wet as it is from the exertions of a longish ride is simply fastened to a pole in a driving wind.

I get some lunch in the house and after that am taken to a small stream in a hollow, where ducks usually abound.

I am in luck, the ducks are there and swimming unconcernedly in a small pool, I admire Marcca chiloënsis, Nettion flavirostris, Net. rersicolor, Spatula platalea, which had not yet been recorded from Tierra del Fuego, and Dafila spinicauda.

The only birds to take wing at our approach are Mareca chiloënsis, the others are quite tame and take no notice, no more than my own ducks of these species at home.

The manager tells me that the birds are not allowed to be disturbed and are so tame accordingly.

After the ducks a few tame *Indians* who serve as peons are shown to me and I am sorry to hear that these poor creatures don't stand civilised life even in a low stage.

The clothes and the houses give them consumption, the children die first, then the men follow and the women make the end.

At about half past one we mount our horses again to proceed to *Philips Bay*.

The country to the East of Estancia Sarita was quite flat at first. In little pools I see more Nettion versicolor and flavirostris and some Coots, and in the grass countless flocks of Chl. dispar.

We pass over some beautiful wild hilly country and then in front of us lies a big plain as flat as a billiard-

table with the sea to the north of it and hills to the east. The plain is overgrown with rufus coarse grass which grows in patches and a great many cows and horses are feeding on it.

Riding on, some buildings come into view.

They are those of the *Philips Bay* station of the Explotadores Company who hold the greater part of Chilian fireland.

Close to the sea is the largest building, the so called *grasserie* were every year thousands of sheep are slaughtered and converted into tallow.

The manager shows me this ghastly establishment and the only thing which I find at all attractive are the thousands of seabirds that feed on the blood and refuse that has run from the factory into the sea.

The birds are countless Larus dominicanus, many Antarctic Ducks, Haematopus leucopus, and little Plovers, and occasional other birds.

After having seen the birds the manager takes me to his house which is situated about three miles away on the slopes of the hills.

On our way we pass again great flocks of *Chloëphaga* dispar and *Chl. rubidiceps*.

The house is beautifully situated in the midst of wild country grand in its monotony.

Next morning I take a walk into the hills and come into a part where some low bushes grow. Here a little bird flutters helplessly in front of me unable to fly. I run after it and catch it.

It is a most beautiful yellow grey and black bird with black glittering eyes. As I catch it it utters a low continuous rattling sound.

It has apparently flown against a telephone wire and hurt its wing. It is a male of *Phygilus? princetonianus*. This beautiful species is a *representative* of the *Lapland Bunting* in the *southern hemisphere* (its *shape*, its *habits*, its style of *song*, its *hindtoe* with *long nail* all point to this) and not a *Phrygilus* at all as it is usually called.

Come back to the house my kind host got me a small cage to put the bird in.

The poor little thing was very thin and feeble and the first thing it did after having drunk was to have a sound sleep. After that it began to feed on canaryseed, and I ultimately succeeded in bringing the little bird home in good health.

During the seapassage later on, this little bird which was quite tame came into full song as the weather got warmer. It is a charming song in style much like the continuous song of the Lapland Bunting and very sweet.

Every morning on the ship it began to sing as soon as the light came.

After my host had helped me with the little bird he told me that he had another surprise for me in the shape of a living specimen of Attagis malouinus which had also damaged its wing against a telephonewire near the house. The bird was produced and I now could admire a living example of this curious grouse like bird in close proximity. Unfortunately the wing was so much broken and damaged that I could not venture to add this bird to my travelling menagerie and so it was decided to put the poor thing out of its misery.

My host told me that this bird breeds inland in desolate wild country and lays four eggs only.

In the great plain mentioned before, which I passed to go to Philips Bay, are still some *Guanacos*, which live peacefully with the cattle. The animals themselves are not killed but all the young ones that are born are at once killed for the sake of their skins.

Besides, in snowy winters many die of starvation in all the sheep districts.

Before the sheep were so numerous the Guanacos could live on the long grass which came out of the snow, but since all the long grass is eaten by the sheep there is nothing for the poor things to live on if the snow lies thick for any length of time.

This and the destroying of the young ones must very Notes from the Leyden Museum, Vol. XXXV.

soon make an end to the existence of the Guanaco, and a great shame I call it of the settlers that not some means are adapted for its preservation.

In the afternoon of the second day at Philips Bay I was to leave Tierra del Fuego where I had spent such delightful days and was to take a boat which was to cross the strait to *Rio Secco* on the mainland with a cargo of live sheep.

The boat could not land near Philips Bay station on account of the low water and so I had to drive to the place of its anchorage about 5 or 6 miles away.

The best road to go there was along the sea-shore. I passed again near the place where all the birds were feeding on the blood of the sheep and also could admire a little flock of 9 Guanacos.

In different places on the shore I saw big tangles of the *Giant Seaweed* coloured brown, also other kinds that were green and others that were carminred. Some fine big shells were also seen of which I took some home.

We reached the boat in good time and after having taken leave of my kind host I got into the ship with my luggage and my little bird.

At ten that same night we arrived at Rio Secco on the other side. I passed the night on board and next morning had breakfast at the house of the manager of the Refrigeratores Company who also showed me what became of the sheep that had come over the water with me.

These were all first quality sheep, they were killed and the carcasses frozen to be sent over to England.

About eleven o'clock the manager who had to do in Punta Arenas kindly offered to take me with him and in an hours time, driving continually through the remains of burnt forest, I was back again at the Cosmoshôtel in Punta Arenas.

In the hôtel I found my two Longbilled Parrakeets in good health and the luggage which I had left there.

In the afternoon I went to Brown and Blanchard's office to inquire when there would be a boat to take me via the Smith Channel, the Chonos and Chiloë to Coronel.

The agent told me that their new boat the "Chiloë" would probably leave the second day and so I engaged a cabin for that journey.

The "Chiloë" and the "Magallanes" are twin steamers built for Brown and Blanchard about two years ago for the service between Punta Arenas and Valparaiso.

As the object is to put into as many ports as possible on the Smith Channel, the Chonos Archipelago and the isle of Chiloë, this conveyance is not meant for people who are in a hurry, but is just the thing wanted for people who, like me, want to see the country.

The whole journey from Punta Arenas to Coronel in Chili took me about ten days, whilst it would have taken ± 5 with a large steamer which goes outside through the Pacific.

The "Chiloë" was supposed to leave Punta Arenas at two in the afternoon, after at first 10 in the morning had been mentioned, but in reality it was  $6^1/_2$  in the evening before we left the harbour. It was Thursday evening before Easter.

Next morning we were just in time to be able to admire again the two beautiful glaciers which I had seen coming to Punta Arenas and besides the usual birds I again met a splendid Ossifraga gigantea which followed the ship for some time.

It was about one o'clock if I rightly remember when we got to the entrance of the *Smith Channel* which we were to follow untill we got to the *Gulf of Penas* (southern latitude  $47^{1}/_{2}$ ).

The weather was glorious, a brilliant sunshine with a fresh breeze.

As soon as we got into the entrance of the Channel we entered a world, full of the wonders of creation of which no words can give a feeble idea. It is a succession of forest clad hills, snowy mountains, bare rocks and glaciers all most fantastically shaped and set off to perfection by the intricate seapassages.

The channel itself is sometimes narrow so that every bush Notes from the Leyden Museum, Vol. XXXV.

and every bird may be seen on its borders, sometimes wide forming like big lakes.

Every now and then side passages or channels opened fresh points of view,

One of the finest *glaciers* was seen on the right shortly after we had entered the Channel.

It was brillant in blue, white and green and came right down into the sea whilst bare rocks and forest clad hills were on the right and left.

The *Pinguins* were very numerous and over one of the hills on the left side numerous Brown Vultures (*Cath. aura*) were circling in the clear sky.

A little farther on I saw the first pair of Antarctic Geese standing on the waters edge at the bottom of mighty rocks.

The beautiful white male was like a spot of snow and was seen at a great distance.

The blackish brown female was much less conspicuous and only visible when we came near.

Soon after, a pair of enormous *Patorapores* or *Steamer Ducks (Tach. einereus)* were disturbed by the ship and got away under much splashing showing as clearly as possible that they were quite different from my flying friends of Tierre del Fuego.

Numerous specimens of *Larus dominicanus* were often seen and also some *White breasted* Cormorans and a few *Haematopus leucopus*.

On the second day before entering the English narrows we had to wait for the tide and the ship anchored in Eden Harbour, Indian Reach.

As we had to wait a few hours I thought it a good opportunity to get on land and having got a boat I went into it with a German gentleman who travelled in the same steamer as myself.

Armed with a small revolver we got into the boat and had us rowed ashore.

About half way I noticed quite a flock of Steamer Ducks all Tachyeres cinereus.

I counted them and found there were over forty. They
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consisted of adults and young birds of the year as was visible by the colour of the plumage and the bill. The old males were conspicuous by their light grey plumage and brilliant yellow bills. The old females were slightly darker and the young ones had darkish spotted bills and duller plumage tinged brownish. All were enormous and heavy birds and quite unable to fly. My friend shot one of the birds with my revolver and as I afterwards saw, when I got it, it was a young male with greenish spotted bill. The greenish colour was especially marked round the nostrils.

After having got the duck in the boat we went on land and here had occasion to wonder at the strange soil.

It was simply a *mass of peat* which was saturated with water. In some parts there were holes full of moisture.

All over this peat grew mosses, most extraordinary to look at. Some were red, some yellow, but the greater part was greenish or brownish. Besides the mosses there were different kinds of peatloving plants, amongst them masses of *Nertera depressa* with red fruit and ferns.

Also little bushes like evergreen prickly Barberies with bright yellow red flowers, and Fuchsia bushes.

The forest consisted of Fitzroija patagonica, Desfontainea spinosa Ruis. & Par. and trees resembling yeus, also of evergreen Beeches (Fagus betuloides).

This peculiar soil made it very difficult to travel over it, as one was in danger every moment of falling into one of the deep water holes. Also one could not stand very long in one place as in that case the surface vegetation would begin to give way.

However, I made the most of my time and penetrated inland as far as I could, wondering at all I saw and enjoying the beautiful weather which would not leave me until we left Melinka after several days.

Time being up we returned to the vessel with the Steamer Duck which I afterwards skinned and have now mounted in my house.

Soon after we were returned on board the ship continued its course.

I went as usual to the highest accessible part of the vessel to enjoy the view and this time also to skin my Steamer Duck.

I was not busy very long when my attention was drawn by a small vessel which as it came nearer proved to be a wooden canoe full of *Indians*. These people who stand on a very low stage of civilisation belonged to the tribe of the *Canoe Indians*, so called because they pass their lives in their canoe's, which they make out of a giant tree which they hollow out. They live in these frail embarcation with their wives, their dogs and their very primitive belongings, and are said to have no habitations whatever.

At night they land and form a sort of hut by binding some young trees together, cover these with guanaco or other skins and huddle together in this misirable shelter to do the same thing next evening, probably in quite another place.

Except a sort of loose jacket of some dark material, probably otterskins they were perfectly naked and it made one cold to see them sitting thus exposed to the icy cold wind with nothing to protect their naked skin. Their hair looked black and matted like the skin of a string poodle and they made all sort of frantic movements as they passed near the vessel.

About half an hour later we passed another canoe full of these same people and soon after we had passed the English narrows; a beautiful Kingfisher (Ceryle stellata Meyen) flew right over me so that I could well see it. Antarctic Geese were also fairly numerous on this second day of our voyage through the channels. They were mostly seen in pairs and always near the waters edge, sometimes on rocks that projected out of the water. These geese are entirely confined to the sea shore but they are never seen on a sandy beach. They want the rocks and the stones on which a peculiar edible kind of seaweed grows which the natives call lutche and on which they may be seen feeding when the tide is low. They probably also feed on marine animals which they find in these same places.

The White Gander is a most beautiful bird and quite a feature in the landscape.

Inhabitants of the country told me that these geese never go inland like the upland and other geese and never go in large flocks.

The brilliant weather which I had all the time I steamed through the Smith and other Channels made the whole scenery most glorious to behold and made it also very easy to see and observe the birds.

Tachyeres cinereus was constantly seen and also little strings of Spheniscus magellanicus.

During the course of the second night after we had entered the Smith Channel we got out of the narrow seapassages and crossed the gulf of *Penas* to enter a deep bay in the morning, behind the Tres Montes peninsula.

To get to Slight harbour which was the object, we had to get through another series of narrow passages between beautiful forest clad hills, and it was about eleven in the morning when we reached Slight harbour, where the ship had to bring some building material for a lighthouse which was being erected on the pacific side of the peninsula, but which place could not be reached from the outside so that the material had to be brought to its destination over land which united the Tres Montes point to the mainland about  $3^{1}/_{2}$  kilometer away over perfectly flat wooded country.

Slight harbour (Hoppner sound) is the end of a beautiful deep bay and, hearing it would take several hours to unload the cargo, I asked for a boat and had myself rowed ashore.

Not far from the landingplace was a small promontory into the sea formed by loose stones and this place was full of birds. The majority consisted of the White Breasted Cormoran *Phal. albiventer*.

Amongst them was one solitary black one *Phal. brasiliensis*, then there were a good many *Larus dominicanus* and on a conspicuous place like the king of the whole tribe a beautiful solitary male *Antarctic Goose*. Having passed

behind this congregation on foot without disturbing them I came to a sandy part of the narrow beach overgrown with enormous trees and on one of them sat a number of Brown Vultures (Cathartes aura).

Some fifty yards further on, also on the overhanging trunk of a dead tree which was beautifully overgrown with mosses and ferns, sat the most beautiful *Caracara* (*Polyb. brasiliensis*) male that I have ever seen. The breast was of a brilliant pearlgrey and the black lines beautifully conspicuous.

I at first wondered what all these carrion birds were doing in this one spot, but I soon found out the reason. Not far away an enormous Sepia or Cuttlefish had stranded and the carrion birds were evidently waiting till discomposition had softened the tough leathery flesh.

I measured this *Cuttlefish* and found that the body measured over three feet in length.

It had a beautiful sharp horny parrot-bill which I cut out and took away with me.

After having gone along the beach for a little while I tried to enter the forest which was mostly composed of fine old beeches mixed with many of the beautiful things, which I had seen more to the north in Chili.

I could not penetrate far however, hardly 50 yards, so full was the forest of rotten tree-trunks some of them overrun with creepers and which made a perfectly impenetrable tangle. On these old trunks grew beautiful *Ferns* and *Mosses* and a good many *Fungi*.

Whilst I was sitting on one of those fallen trunks admiring the surrounding trees and shrubs including *Fuchsias*, two inquisitive birds came up to me coming quite close, now on this side and now on the other, sometimes even passing under my legs. They were a pair of the Redbreasted Robin (*Pteroptochus rubecula*), the bird that generally laughs at the intruder and disappears.

These birds who had perhaps never seen a man were determined to have a good view of so strange a creature and talking to each other in a low voice and jerking

their upstanding tails they made the best of their opportunity. — I had never before seen those birds so near and so had plenty of time to admire their red breasts, black beady eyes and quaint movements.

After a while they disappeared in the tangle and after I had waited a little longer listening to the mysterious whisperings of the virgin forest with all its secrets, I found my way back to the beach and to the boat that was to take me again to the ship.

I found that the ship would pass the night in slight harbour and would leave the following morning.

This came to pass as soon as it was daylight and we again entered the narrow passages between forestelad hills as the day before.

As we circumvened Tres Montes Peninsula and got out towards the Ocean a most wonderful sight awaited me.

The sky was blue and the atmosphere as clear as glass and standing out against the clear blue sky was the most magnificent panorama of *mighty snowmountains* intercepted by glaciers, that man could see.

They extended to the South and were the southern range of the Cordilleras.

In front of these snowmountains were mighty ranges of rocks-forming like an enormous wall that descended into the sea.

Conspicuous amongst the glaciers was the tremendous "lofty glacier", which like a veritable sea of ice descended with one mighty sweep into the Ocean.

The captain of the "Chiloë" who had done this voyage many and many times told me that he had never seen anything like the sight we had to day, as the sky is hardly ever clear for any length of time.

Before getting clear of the bay we passed a small forest-grown island with a sandy beach and here sunning themselves were a number of *Sealions* (*Otaria jubata*) who quietly let us pass.

In the Pacific we were met by numerous Albatrosses, a good many Black Petrels, Majaqueus aequinoctialis and

many Gulls, and soon also the lovely *Cape Pigeons (Daption capense)* were flying around us. On the first day of Easter the spouts of *Whales* were also seen repeatedly, but the animals being hunted all the year round they are very wild and don't come near.

The coast of Tres Montes etc. was remarkable by the fact that nearly every *promontory* that ran out into the sea had a big rock standing in front of it like one of the stones of stonehenge and sometimes a second smaller one standing in front of that one.

In one place there was like an enormous ruined castle with archways and windows standing in the sea away from the coast.

We now passed along the western side of the *Chonos Archipelago* and the clear weather always being with us we got a splendid view of the more northern snowmountains.

Conspicuous amongst them all was the extraordinay Asses Ears mountain with its snowclad top, surmounted by two sharp points like the ears of an ass.

Then more to the north followed smaller snowmountains, then the enormously massive *Yanteles* and in the end the sharp snowclad pyramid of the *Corcorado*.

It was a sight never to be forgotten.

As we neared the island of Ascension which is the most northern island of the Chonos Archipelago we came near its rocky coast and here is one of the strongholds of the Antarctic Goose. I never saw so many anywhere and was told by the captain that he had always seen them there in such numbers.

They did not form flocks but kept together in small families which were sitting on the rocks along the water.

There were also a couple of White Herons and a good many Phal. albiventer.

Following the coast we turned to the east and anchored at *Melinka* a small place on Ascension.

There we had again the most glorious view of the before mentioned snowmountains and the foreground, formed by

the sea, small forestelad islands and mighty bare rocks as a battlement before those snowmountains, made it all the more beautiful to behold.

I went ashore as soon as I could and being away from the few huts that formed the settlement I came upon small families of *Steamer Ducks* or *Pato Vapores* which were sitting on the stones projecting out of the sea.

They belonged all to the *large nonflying* species and here better than anywhere before, I had the opportunity of studying them as they were quite tame.

There were generally a pair of old birds and some young ones. The old birds were grey — the male the clearest of the two — both birds with yellow bills. The young birds were of a more brownish grey on the sides especially and had darker bills in which the yellow was mixed with olive green; these birds had also dark legs.

The young birds were ever heavier looking than the parents and most certainly did not fly nor attempt to do so.

They all dived with great diligence.

In this same neighbourhoud I saw many Shags with white underside but black foreneck (Ph. magellanicus Gm.) and on some I noticed red fleshy warts round the base of the bill.

A little farther I came upon small families of Antarctic Geese (Kaïks is the native name there, whilst in the south they call them kaïkénos) and had good opportunity to study them.

The adult males are snow white with black bill, large glistering black eyes and light citron yellow legs and feet, they look robust strong birds.

The adult female has a yellowish fleshcoloured bill, a yellowish ring round the eyes and pale yellow legs. Their general colour is dark brown and black finely streaked with white; the head is brown. The shoulders, back and tail are white and very conspicuous when the birds fly.

The young birds of the year before they have moulted are more or less similar to the female but the colours are dull, the tail is white with black spots and the bill and legs are blackish.

I think it probable that at the first moult the young male moults all his feathers except the large flightfeathers whith are retained untill the second moult.

After this first moult the young male accordingly is entirely white except the black large flightfeathers. Bill and legs have then attained their black and respectively yellow colour.

I saw a few males in this stage and this would quite agree with what happens with other young geese of the genus *Chloëphaga*. These at the first moult, shed all their feathers except the large flightfeathers.

I saw a good many of these geese during my exploration of this coast and found then very tame so that it was so much easier to observe them.

A native of the place who after a while came to me, told me again as I had heard in the south that these *Kaïks* are always along the sea and feed on the seaweed called "lutche".

The friendly native finding me interested in the geese told me that I could buy a young bird which was kept alive in the village, if I liked to do so.

Unmindful of all the difficulties that would fall to my lot if I should attempt to carry it home I bought the bird.

It was very wild and was kept in a small enclosed garden. It proved to be a young male that had not moulted and it was featherlight.

The good woman, who had kept it, told me that it fed on anything, but as she also told me, that I must be sure to take a lot of seaweed (lutche) with me, I was rather sceptical of the truth of the first assertion and I afterwards had the greatest difficulty to induce the bird to eat anything else but lutche.

On the beach were again great masses of *Giant Seaweed* and near the coast in damp places some very fine dark green *leathery Ferns*.

Towards the end of the afternoon I went back to the ship with my goose in an old box half full of seaweed.

On board, the friendly captain offered me an empty Notes from the Leyden Museum, Vol. XXXV. dog-kennel which he had on the bridge, to put it in, and with the help of some wire netting the goose was soon installed.

The sun was setting now and tinged all the snowmountains with gold and rose colour, and they gradually disappeared in the darkness to be seen by me no more as next day there was a pouring rain!

We stopped about 24 hours at Melinka and then set course to the south eastern coast of Chiloë.

This part of Chiloë is rocky and there were still some Antarctic Geese but I saw no more Steamer Ducks.

More to the north the coast becomes mostly sandy and no more *Antarctic Geese* were seen by me, so that the *south coast* seems (at least on the eastern side) to be the most northern limit of their distribution.

The Steamer Duck I did not even see on or near the south coast — nor saw it anywhere else afterwards.

A little south of Queilen where I landed on the east coast of Chiloë I saw a good many *Black Cormorans, Gold-crowned Hummingbirds* on the Fuchsias, and along the sea a good many *Cinclodes patagonicus*.

There were here a good many bushes of *Escallonia* macrantha and other flowering shrubs, also the *Climbing* Bamboo and a few Gunnera scabra. In the woods were some *Ferns* that formed small trees with stems of two to three feet height.

There was a little grey bird with long pointed tail, brown back and white eyebrowmarkings.

In the port of *Castro* where we came a day later I saw several *Dolphins*, some *Whitebreasted Cormorans* and a good many *Blackheaded Gulls* (out of colour of course) of which some had beautiful roseate breasts.

We afterwards passed opposite an island east of Chiloë opposite Achao. Part of the coast looked as if it had-fallen away by the water getting under it, leaving a steap incline. This was overgrown with Gunnera scabra and as I afterwards found, places like this on the coast of Chiloë, were all full of this same plant. There were miles and miles full of it.

On this particular island there were low rocks projecting into the sea and these were full of Pinguins or white breasted Cormorans, or both, I could not quite make out. In the harbour of Achao I saw three white breasted Cormorans, a lot of black headed Gulls and a few Haematopus leucopus also some Larus dominicanus.

At Dalcahie the ship stopped several hours and I went on land.

The settlement looked most peculiar by the number of houses which had been built on poles over the sea. — This is done in many places on Chiloë and is done by the inhabitants to escape the payment of a small duty which is due to the Chilian government for every house that is built on land.

A little inland some land was being ploughed and swarms of *Chimangos* were following the plough for grubs.

Diucas were numerous and a few Zonotrichia pileata were near them as usual. I also met a few specimens of the beautiful Taenioptera pyrope which I had so often admired more north.

In several places in Chili where I met with this bird, so f. i. at Puerto Octay, I often heard in the evening a clear whistling song.

And as soon as this was heard, voices responded from all sides — making quite a chorus.

I suspect that *Taenioptera pyrope* is the author of these concerts although I am not quite sure. A solitary Black? Vulture was also seen by me at this place.

From Dalcahie we steamed to Puerto Montt and whilst we were lying in the harbour I saw enourmous *Jellyfishes* of at least 2 feet diameter swimming in the clear water.

They had a water milk colour and were fairly active.

There were also a good many *Pinguins* in the bay. On land I saw several *Cathartes aura* and some *Taenioptera pyrope*.

Near Ancud, the capital of Chiloë, where we went next there were a good number of white breasted Cormorans and a few black ones. Also Pinguins and black headed Gulls.

Ancud is by far the nicest place I saw on Chiloë, and the country immediately near it has a prosperous look.

From Ancud the ship steamed again towards the Ocean and had to get over some extremely strong currents or rapids — which take the water from narrows between Chiloë and the mainland, into the Pacific.

The danger is that the currents take the ship sideways and so succeeds in overturning it.

That this does happen occasionally was proved by the numerous wrecks which we passed.

However all went well and we came into the Pacific all right. On the way I noticed some fine *Brown Cormorans* with yellow bill and white marks on neek and back (*Phal. gaimardi*) which swam in little parties of 5 or 7.

There were also numbers of *Terns*, silvergrey with black cap and red bill, and some *black headed Gulls* of which some were *roseate*.

As we neared Corral we again passed the whaling-station and here were five *Brown Pelicans* (*Pel. molinae*) fishing not far from it.

From Corral we went north to Coronel and on the way I saw occasionally a curious *Diving Petrel (Pelecanoides garnoti* or *urinatrix*), probably the first.

These little birds in shape like a little Auk would suddenly appear on the surface of the water close by the ship to disappear as suddenly.

I also saw some small Black Petrels.

There were also some of the larger sooty black *Petrels* and lots of the smaller deep black ones, also a single *Albatross* (*Diomedea melanophrys* or *exulans*) that did not come near.

In the bay of Coronel there was a single Brown Pelican.

In *Coronel I* left the "Chiloë" and landed with my birds and my luggage to take train to *Conception* where I was to spend a day.

Conception is a rather well kept town and it boasts of pavement in the greater part of it.

There is a sort of model garden in the outskirts in Notes from the Leyden Museum, Vol. XXXV.

which amongst other things of less interest I found two beautiful males of *Anas specularis* or *Pato de las Cordilleras*, as they called them there.

As these birds are as far as I know never imported alive I noted the colour of the soft parts.

The legs are of a beautiful orange yellow, the iris is blackbrown, the bill is bluegrey with elongated square black spot on the top near the forehead, and black nail.

The wing speculum is beautiful beyond description and it is a great pity that we never see these birds alive in Europe!

In the evening I took the train and with my Antarctic Goose, my Longbilled Parrakeets, my Fuegian Finch and my luggage arrived next morning in Santiago.

There I spent a few days, and one evening when walking in the Quinta Normal I was rather surprised at seeing a giant redwood tree (*Taxodium sempervirens*) and some equally lofty trees around it full of large birds which on closer inspection proved to be all *Nightherons*, *Nycticorax obscurus*.

What those birds did in the centre of a large town I cannot understand. When I went to the office to get a railway-ticket to Buenos Ayres I was told that a snowfall in the Andes had stopped the road and that they could not guarantee my getting through.

As the train would only leave in a couple of days they hoped however that the line would be cleared in time.

On the appointed day I heard to my satisfaction that everything was all right "pro tempore" — and I embarked myself and my belongings at five o'clock at night at Santiago station. The train in this late season does not go through at once but one has to spend the night at Los Andes.

As the train was crowded and the accommodation at Los Andes limited it took a lot of talking to get a fairly good room which I had to share with a fellow traveller.

Los Andes is beautifully situated in the mountains and the cold pure mountain air was quite delightful.

Next morning at 10 I believe, we started for good, getting well into the mountains.

The Tree-caeti were in full bloom and gorgeous with their scarlet blossoms which entirely covered the stems.

We mounted higher and higher and left the vegetation behind us and in time found ourselves in the high Mountain scenery which now clad in snow looked quite different from two months ago when hardly any snow was seen. The mountain lakes with their pure water in their white surroundings were most glorious to see and I will not even attempt to give an idea of the glorious combination of the white mountains, the blue sky and the pure air!

Near Caracoles where the train enters the tunnel I saw a Chimango in the midst of the snow.

At Los Cuevas we came out of the tunnel (it takes about 14 minutes to get through it) and here found a car with some tea and bread which we could use whilst the train was busy with different arrangements.

Of course we were late, but we had got through without mishap of snowfalls etc. which was a great thing.

We also got on slowly but surely to Mendoza, where I had to change again into another train with sleeping car, to at last go straight to Buenos Ayres.

I do not tell all I had to go through with the railway officials with my birds, especially the Antarctic Goose. Suffice it to say that I got through and reached Buenos Ayres the following night at 2 o'clock in the morning, but I don't advise anyone to try the same experiment!!

In the Argentine pampas I saw the *Chimango* as usual, also a good many *Caracara* (*Polyb. brasiliensis*) and Burrowing Owls.

In a rough damp place I saw a little Pampas Deer Buck (*Cervus campestris*) which looked at the train — and not far from there also in rough land, where no cattle was, a *large Tinamou*, apparently *Rhynchotus rufescens*, flew away at our approach.

From Buenos Ayres, after I had settled every thing for my return journey which was to take place on the 6<sup>th</sup> of May, I went for a day to La Plata to see the museum.

On the way, going there by train I saw a small flock of *Guira piririgua* sitting on a fence in a nearly treeless country.

In the reeds of a swamp were some *redshouldered Starlings* and *Columbula picui* and other doves were seen repeatedly.

In the parks of La Plata the *Red Ovenbird*, Furnarius rufus, was very numerous and very conspicuous, his loud voice being heard continually. Also several Sulphury Tyrants.

In the *La Plata museum* I visited the wellknown collection of South American fossil animals and of skeletons of the different races of Indians etc, courteously assisted by the director.

Near the museum is a small Zool. Garden, where I saw some fine Scalions (*Arctocephalus australis*), and which is nicely laid out, but not half ready.

In Buenos Ayres next day I visited again the Zoological Garden and the Mercado Central, where I got some pretty birds, and on the 6th of May with all my menagerie I left on board the "Zeelandia" for the returnvoyage.

In Santos I saw a Sula with yellow bill (probably Sula sula) flying over the bay; and after a crossing of 22 days on the  $29^{\rm th}$  May landed again at Amsterdam well satisfied with my four months trip.

Gooilust, August 1912.